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SEX AND ART.[1]

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Introductory. In the following pages the attempt is made to connect, on a psychological basis, extremes, which as early as the time of Socrates[2] were felt to be in vital relationship with each other. In modern times, Schopenhaur[3] may be said to have treated the metaphysics of the subject, but its psychology, despite the increasing interest in each of the terms involved, has heretofore been neglected. The present article bases the connection on the one hand, the equivalence and interchangeability on the other, of the sexual passions (including the Anger-Fears) and the more intellectual instincts of Art, Religion, and the interests and enthusiasms generally, upon the fundamental quality of erethism found in every animal cell. The psychological expression of this bodily state is traced from its simplest manifestation, through animal combat and courting, the courting of the lower races, and the ensuing and accompanying religious, dramatic, and otherwise symbolic phenomena of Phallicism (all to be regarded as essentially subdivisions of courting) to the more complex conditions of modern times. Sexual perversions are regarded as atavistic degenerations, failures, or fetichisms of the psychological laws of courting. Modern art is represented as being

[1] In the preparation of this article I have much pleasure in acknowledging the kind and sympathetic assistance of Pres. G. Stanley Hall, by whom the subject was suggested, and with whom I conferred frequently in its elaboration.

[2] Cf. Plato's "Symposium."

[3] Cf. his doctrine of "Will (of which the focus is sex) and Idea."

the psychical expression of an erethism which is an equivalent, and historically a derivative, of that of sex; and as being therefore an overflow of some of the deepest emotions as well as a product of the intellectual capacities. A plea is thus entered for the emphasis of those activities which will form the noblest and most natural irradiations of this plastic and variable passion of sex. A full portrayal of the facts which support this view has not been possible within the limits of a single article. References are, however, made in sufficient number, it is hoped, to enable the reader to complete the picture by efforts of his own.

Erethism. The phenomenon of erethism is one which involves the most profound and varied elements of the bodily structure. It is indeed a constant accompaniment of animal life. The amœboid movements of the protozoa show this function in operation indifferently at any portion of the body and before the differentiation of any subservient structure, while the alternate erection and flaccidity of the metazoan cell, shown by Mosso, Hodge, and others, to depend upon nutrition and to correspond to states of activity and fatigue, carry this function into every part of the most highly developed organism. Among the higher animals this capacity differs with different tissues and groups of cells, with the age and constitution of the individual, and with sex, while it often seems to follow a certain rhythm not directly dependent upon the environment.

At no period in the life of the individual is the phenomenon of erethism more evident and more important than at the time of reproduction. Balbiani describes the extraordinary agitation of the paramœcia, which, he thinks, the want of nourishment is not sufficient to explain. "They seek and pursue each other, go from one to the other, touching with their cilia, sticking together for some moments in the attitude of sexual contact and then freeing themselves in order to join some other. These curious plays by which these animalcules seem to provoke each other to sexual union last often many days before they become final."[1] The conjugation of these animals depends, it is to be observed, upon the local erethism and erection of corresponding portions of their bodies through which their union is effected.

With the paramœcia there are no permanent sexual organs. The whole of the body is the medium of excitement, and the whole living contents of each body flow together and are individually lost in the act of conjugation. Among the metazoa, on the contrary, a portion only of the body is usually sacrificed,

[1] Beaunis, "Sensations Internes," p. 51.

but this sacrifice is accompanied normally by an evolution and loss of energy which profoundly affect the organism and which often result in exhaustion and sometimes in death. With the metazoa, also, as specialization advances, the sexual erethism becomes accented in certain directions. Definite sexual organs become developed. The reproductive glands, organs of intromission, of stimulation and attraction, make their appearance, while the nervous system, itself a highly erethic tissue, comes to bind together these different organs and unite them with the organism as a whole.

That the capacity for sexual erethism is closely connected with the physiological condition mediated in the higher animals by the sympathetic system, and that it acts and reacts upon it, is shown by the effect of climate, food, drugs, hunger, disease, age, and hereditary constitution, in favoring or retarding reproductive functions. The sympathetic nervous connection between the generative organs and the stomach and alimentary canal, for example, is one which is exceedingly close. Says Dr. Edward Tilt:[1] "The debauché and the roué are frequently at a loss for terms to express the annoyance of their sufferings at the pit of the stomach." These sensations—"of gnawing and tearing, sinking and faintness, rawness, not pain, but an irritation worse to bear than pain"—are due, he thinks, to the too great reaction of the sexual organs on the central sympathetic ganglia.

Drugs which stimulate the glandular activity, especially of the skin, act also as aphrodisiacs. The effect of baths in either stimulating or allaying sexual feeling shews the connection with the skin. Moderate muscular activity acts directly on the erectile muscles and indirectly through the nervous system. To quote LaGrange:[2]

> Bringing the muscles into action always produces important modifications in the processes of the great organic functions. There is an active congestion of all the organs during violent exercise, hence more active performance of function.

The indirect action through the brain may be of still greater importance.

> Stimulation of the brain may be very great under the influence of active congestion brought about by muscular action. It is possible to be made drunk by movement, and in certain brains predisposed either by their native organization or by exalted ideas or passion, muscular action is often the prelude to actions resembling those of intoxication and even of madness.

The effect that a muscular exercise has in thus extending a

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[1] "Change of Life," p. 96.
[2] "Physiology of Bodily Exercise," p. 28.

state of erethism may help to explain the apparently unnecessary activity of many animals preliminary to copulation.

Beaunis[1] notes the importance of the somatic background in sexual excitement. "Sexual sensations," says he, "are functional sensations. Here the whole functional apparatus appears to be constituted for the most lively and exalted enjoyment." The numerous nervous fibres and the end organs (genital corpuscles) are not, he thinks, sufficient to account for this. The cause must be sought rather in the relations which exist between the genital apparatus and all the other parts of the organism. These relations are very evident at the time of puberty. When the generative apparatus acquires its development, the other organs participate in the impulsion. This is due to the nervous connection rather than to that of the blood. Every modification of the sexual organs and every excitement will then have its effect on the nervous system and through it on the whole organism, nervous centres, voluntary and involuntary muscles, heart and vessels, glands, etc.,—everything is affected. As the local excitation gradually increases, so does that of the general system. One has all the conditions of an excess of functional activity and of exceptional intensity.

Clouston[2] gives an interesting case showing the intimate connection of the sexual erethism with the brain.

A gentleman at the age of forty-nine had been for twenty-six years subject to regularly recurring brain exaltation every four weeks. The *nisus generativas* is greatly increased, and he says that if in that condition he has full and free seminal emissions during sleep the excitement passes off; if not it goes on. Full doses of bromides and iodides and sometimes a long walk will stop the excitement and sometimes not.

And in another place:

American physicians tell us that there are some schools in Boston that turn out young ladies so highly educated that every particle of their spare fat is consumed by the brain-cells that subserve the functions of cognition and memory. If these young women do marry, they seldom have more than one or two children, and only puny creatures at that, whom they cannot nurse, and who either die in youth or grow up to be feeble-minded folk. Their mothers had not only used up for another purpose their own reproductive energy, but also most of that which they should have transmitted to their children. . . . . Why should we spoil a good mother by making an ordinary grammarian? [3]

Sex itself plays an important part in determining the erethic condition. According to Geddes and Thompson,[4]

[1] "Sensations Internes," p. 242.
[2] "Mental Diseases," p. 223.
[3] Cf. also Edward Clarke, M. D., in "Sex in Education," 1880.
[4] "Evolution of Sex."

we must recognize a male and female diathesis. The quality of "maleness" consists in activity, energy, variability, the production of a greater abundance of waste products, and is typified by the ever restless sperm cell; that of "femaleness" in quiescence, greater power of nutritive absorption, and less power to evolve energy. "The males are stronger, handsomer, or more emotional, simply because they are males, *i. e.*, of more active physiological habit than their mates. . . . The males live at a loss, are more katabolic — disruptive changes tending to preponderate in the sum of changes in their living matter or protoplasm. The females, on the other hand, live at a profit, are more anabolic—constructive processes predominating in their life, whence, indeed, the capacity of bearing offspring." The greater preponderance in the females of the higher animals of the sympathetic, and in the male of the cerebro-spinal system as well as his greater muscularity, would be a natural outcome of this difference.

Erethism of any kind in both male and female represents a katabolic crisis, and while depending upon a more stable past physiological condition, is itself disruptive in its nature. A sudden check in food will greatly increase multiplication among lower forms. In some cases "the female forms numerous germ cells and terminates her individual life by bursting." "Both Weismann and Goette note how many insects (locusts, butterflies, ephemerids, etc.) die a few hours after the production of ova. The exhaustion is fatal and the males are also involved. In fact, as we should expect from the katabolic temperament, it is the males which are especially liable to exhaustion. . . . In higher animals the fatality of the reproductive sacrifice has been greatly lessened, yet death may tragically persist even in human life as the direct nemesis of love."[1]

But not only of reproduction, of life itself it might be said that it is a masterly retreat toward the grave. The process of the years has nevertheless succeeded in bringing about a continually wider margin for the individual. We die, but we have learned to live in doing so. Hence it is not strange that the sexual life, rooted as it is in death, has become so richly provided with a margin of health and energy that its normal activity conserves and stimulates the organism instead of necessitaing its destruction. The moderate bearing of children, despite its physiological expense, is well known to be conducive to health. Minot[2] shews that with the guinea

[1] Geddes and Thompson, op. cit.
[2] *Journal of Physiology*, May, '91.

pig the production of offspring is a stimulus to growth. Neither should coition have an injurious effect. Says Lallemand, as quoted by Acton:[1] "When connection is followed by a joyous feeling, a *bien être général*, as well as fresh vigor; when the head feels lighter, the body more elastic and ready for work; when a greater disposition to exercise or intellectual labor arises, and the genital organs evince an increase of vigor and activity, we may infer that an imperious want has been satisfied within the limits necessary for health. The happy influence which all the organs experience is similar to that which follows the accomplishment of every function necessary to the economy."

Specialization. The movement of specialization in the sexual organs and the functions of erethism has had for starting point the reproductive cell. At first, almost any cell suffices as a germ. Later, tissues of comparatively undifferentiated cells are set apart, as ovaries and testes. Morphologically, these glands differ from others in arising from the mesoderm. Functionally, they are characterized by their capacity for erethism, their marked periodicity, and their reciprocal action upon the rest of the organism. During the mating season they are found to be greatly swollen and gorged with blood. In man, hysteria, epilepsy, and erotomania are closely connected with a morbid erethism of these glands, while their loss frequently causes profound physiological changes, more marked, indeed, than the loss of any other organ not necessary to the life of the individual.

But, although these glands are the starting point, and always retain their primary importance, it is not long before accessory organs are developed which, in awakening the superadded sexual activities, stand between the primary organs and the general system. Goltz,[2] for instance, has shown that with the male frog it is not the testes, but the pressure of the seminal fluid in the receptacles that directly leads to copulation. The testes may be cut or taken out (of the brainless male animal) without lessening his grasp, while section of the receptacles has an immediate effect. If, however, they are now filled with milk or other fluid, the old stimulus is again exerted. When other organs are developed, such as the prostate gland, ejaculatory ducts, erectile muscles, clitoris, penis, and vagina, these come to occupy a similar position with regard to the general system. Castration, for example, does not always incapacitate for sexual union,

[1] "The Functions and Diseases of the Reproductive Organs," p. 182.

[2] "Die Begattung des Fröches."

nor prevent masturbation. Ovariotomy does not always diminish sexual feeling. An inflammatory condition of the prostate is often the cause of sexual excitement, and of unduly frequent nocturnal emissions. Irritation of the glans, due to phimosis or other causes, sometimes precipitates the sexual orgasm. Excision of the clitoris is often successful in nymphomania.

The reflex connections of these organs, known to be situated in the lumbar region of the cord, must be connected with them as necessary to their functions, but while they are undoubtedly connected with the brain, nothing is known of the neural paths. That the brain acts as an inhibitory agent is shown by the erections and involutary emissions following decapitation of criminals.

Beaunis[1] states that "Tarchanoff has seen stimulation of the corpora quadrigemina in the frog immediately stop the coupling. The optic thalami, according to the researches of Albertoni, have the same function in the tortoise." Jacobson[2] quotes Eckhardt to the effect that by electrical stimulation of the crura, pons and upper cervical region of the cord, distinct erection of the penis could be produced, and states that—

> By other fibres the reflex act which constitutes erection may be inhibited from the brain. . . . While the influence of the brain in producing erection is evoked by sexual thoughts, or by sight, it is arrested or removed by vigorous mental employment or brain-work. The importance of the controlling fibres which run downwards from the brain is shown when these are interrupted by fracture or dislocation of the cervical cord. Priapism appears as soon as the effects of the concussion have passed away.

The sight, sound, odor, or merely the mental images of objects of desire are capable of producing sexual excitement. As Ribot says: "It is evident that impressions must reach the brain, since they are felt, and because there are centres from which the psychic incitations are transmitted to the sexual organs in order to arouse them into action."

It must be observed, too, that the accessory organs are sometimes quite remote from the primary glands, as in the male frog, where there is no intromittent organ, but where the arm and breast are highly sensitive to the shape of the female, easily distinguishing it from that of the male even when this is clothed in the skin of a female. The swollen thumb probably increases this sensitiveness in some way. The reflex apparatus is here lodged in the thoracic region.

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[1] "Sensations Internes," p. 50.
[2] "Diseases of the Male Organs of Generation," p. 479.

Removal of the skin of the breast and arm stops copulation, even when removal of the head fails to effect this purpose.

The complexity of a number of different parts united by nervous paths to subserve one function and, therefore, practically to form one organ, allows of great plasticity in their use and development. Some part of the system may drop out without preventing the function of the rest. In dogs, for example, there are no vesiculæ seminales, which lack is the cause of their exceedingly prolonged coition. In man the corpus spongiosum may be useless without destroying pleasure or capacity. Closely allied species present the greatest variety in their sexual organs. Among species of the same genus, parthenogenesis may be the rule in one, sexual reproduction in the other. Darwin notes that "secondary sexual characteristics are essentially liable to vary both with animals in a state of nature and under domestication."

Plasticity is better marked in the more recent organs of the system. Diseases of the urethra, the prostate, and the functions of erection are more common than diseases of the primary glands, and when these are affected, it is frequently due to the initial failure of some other portion, as when irritable prostate causes too frequent emissions, ending finally in impotence. The nervous connections which determine the length of the orgasm and the succession of the functions constituting copulation are still more easily deranged, and most easily of all the associations in the brain represented psychologically by sexual images and desires. That these last are not simply necessary reflexes, but superadded organs and functions, is shown by their persistence after the primary organs have been destroyed. The most libidinous of men, also, are often those who are entirely impotent, as if the sexual erethism had concentrated itself entirely upon the organs that remain.

The separation of the sexes and the gradual dropping of parthenogenesis is one of the most important stadia in the progress of life. Either sexual or asexual generation may occur among the protozoans, cœlenterates, worms, tunicates and arthropods, although it is only in some classes of the protozoans where sexual methods are not found at some period in the life of the species. The echinoderms, molluscs and vertebrata are always sexual. Hermaphroditism, where different sex organs occur on the same individual, is quite characteristic of primitive species. In many worms copulation occurs in pairs, when the male and female organs of each are brought reciprocally in contact, or in chains, when each

animal is in contact with two others, with the exception of those at the end. This exception is interesting as causing the inactivity of a male organ on one side and a female on the other, practically a monosexual arrangement and suggesting an evolutionary transition.

That the separation of the sexes always presupposes an underlying unity is indicated by many facts. The same organ in some species produces both eggs and spermatozoa, either at the same or at different times. Accidental or reversionary hermaphroditism, where one-half of the animal is male and the other female, the morphological correspondence of male and female organs, the male uterus, for example, are cases in point. In the frog, the testicles grow up round the ovaries, when if the sex is to be male the latter are absorbed. Even in the human embryo it is the sixth week before the sex can be distinguished.

As we ascend the animal scale, the reproductive instinct, although retaining its unity, becomes differentiated in two directions, primarily dependent upon the separation of the sexes and corresponding to their differences. On the one hand, the more anabolic, nutritive, feminine instinct of care for the young, on the other the katabolic, more erethic and masculine instinct of sex, originating in, radiating from, and culminating in the act of copulation. These two instincts mutually support and strengthen each other, and in man and the higher animals neither is complete without the full development of the other. They are both represented in either sex, although the sexual instinct is generally stronger in the male.

Radiation. The specialization of the sexual organs, as we have seen, is intimately connected with the development of the nervous system, and between this and the most recent or accessory of these organs, the bond of union, although not more fundamental and permeating, is yet more direct and close. As we ascend the animal scale, we find a number of organs more remotely but yet definitely connected with the reproductive functions, organs, to wit, of stimulation, prehension, and attraction, depending increasingly for their activity upon the higher senses and the brain, and giving rise to functions more distinctly psychological. In many cases portions of the body primarily developed for other purposes, such as hair, feathers, voice, etc., are turned to account in sexual stimulation and selection, and functions connected with the sexual life and developed under its influence may again become important in the immediate struggle for existence. Goltz, in his classic experiments on the frog, has shown that every part of the female exercises an attraction on the male, even little bits of flesh floating in the water.

"But," as Beaunis has it, "he was not able to determine by what sensitive avenue this attraction was exercised, since every organ of sense may be successively destroyed in different males without any of them ceasing to couple." Here, as elsewhere, the characteristic feature of sex is the law of irradiation, which might be stated as follows:

Starting from the act of copulation, the sexual instinct tends to widen and become more complicated, until the whole of the organism is involved in its activity.

This law is a necessary outcome of specialization and the erethism of sex. Sexual union is properly the climax of an erethism which involves the whole economy, but more especially those special organs of radiation, the brain and nervous system.

Many species quite low in the animal scale show traces of this feature. Annelids, snails, slugs, many crustaceans and insects betray unusual excitement at pairing times, and frequently possess "love-arrows" and other organs of stimulation not necessary to propagation, but serving to spread the erethism to the largest possible extent. In the higher animals sight and hearing, with their cerebral connections, take the place of other means of stimulation. With mammals the sense of smell occupies a position of importance, even in the highest species.

Selection. As the sexual instinct develops, concomitantly of course with the whole organism, the differentiation due to the separation of the sexes and the progress of irradiation becomes more apparent. Instead of a simple mutual approach, we find the male more generally seeking the female, fighting with other males for her possession, and actively displaying for her benefit his physical prowess and other charms. The differentiation of the sexual instinct, and its concentration in the male, itself tends to further radiation. Sexual selection now makes its appearance, and, according to either Wallace's or Darwin's theory, favors the descendants of those females which have the powers of comparison or observation, or whatever it may be, that leads them to choose, when they do so choose, the most capable, clever, and vigorous males. The direct rivalry of the males weeds out the inefficient, and here a relative tire or exhaustion of either the physical powers or the more psychical qualities of courage and endurance will have the same effect as complete defeat or death. Success is gained when the opposing male, for whatever reason, no longer feels like proposing. In relationship to the other motives of his being, the sexual instinct has been defeated. The relatively incapacitated male, even when he obtains a mate, will leave descendants less able in the struggle

for existence, and less likely themselves to continue their line of descent.

With the added inherited possibilities of irradiation and the increasing demands for higher physical and psychical qualities, the sexual instinct is thus being continually brought up to pass a new examination. When successful, it not only fills the old paths and satisfies their demands, but, true to its origin, carries the process still further on.

Combat. In the higher animals, the sub-departments of this examination are courting and combat, two divisions of the sexual instinct which mutually support each other, although one is often more predominant in a given species than the other, or may even obtain exclusive possession. But that one does not in most cases entirely supersede the other is shown by the fact that many birds and mammals continue courting after selection has been made. Those birds, *e. g.*, which are best provided with weapons of offense are also the most assiduous in courting. While stags are fighting, a doe will sometimes make her escape with another stag. The same is related of the capercailzie.[1] The fact, too, that so much of the combat is merely a harmless rivalry makes it difficult to say where combat ends and courting begins. At times they may even become identical. Both, at least, seem to go hand in hand, and demand the exercise of different sides of the nature of both the males and females.

The animal world is full of examples of the operation of these instincts. The males of spiders search eagerly for the females, and have been seen to fight for possession of them. When two male field-crickets are confined together, they fight till one is killed. The Chinese keep species of mantis in cages and watch them fight like game-cocks. Many beetles fight for possession of the females, and some, as the common stag beetle, are well provided for this purpose with great toothed mandibles, much larger than those of the females. The males of butterflies sometimes fight together in rivalry. Male sticklebacks fight furiously in presence of the females. They sometimes rip open their opponents with their lateral spines. "When a fish is conquered, his gallant bearing forsakes him; his gay colors fade away, and he hides in disgrace among his peaceable companions."[2] "The male salmon are constantly fighting and tearing each other on the spawning beds." The teeth differ with the sexes in many fish. Frogs have been observed fighting with much violence during the breeding season. Many lizards are very quarrelsome. The combats of a South American tree lizard usually end by the tail of the vanquished being eaten. "Almost all male birds are extremely pugnacious." The ruff fights much like a game-cock, seizing its opponent with the beak and striking with the wings. The great ruff of feathers is erected and serves as a shield. Bloody fights occur between the

[1] Darwin.
[2] Darwin, "Descent of Man."

males of the wild musk duck. Male snipe fight together, and the males of the common water hen fight violently for the female who looks on quietly. Peacocks sometimes engage in fierce conflicts. The black cock, capercailzie and many species of grouse and pheasant fight desperately at times. The game-cock has been known to fight when its legs were broken and afterwards spliced in order to enable it to stand until it received its death stroke. A few birds are believed never to fight, as with the woodpeckers, although the hens are followed by half a dozen suitors.[1]

The fighting instinct, too, underlies a great deal, if not all, of rivalry and courting.

"A sterile hybridcanary bird has been described as singing while viewing itself in a mirror, and then dashing at its own image. It attacked with fury a female canary put in the same cage."[2] This also shows the capacity of the secondary function to become dissociated. Male birds give plenty of evidence of jealousy of each other's singing. Chaffinches are habitually caught by playing on this instinct. The domestic cock crows after victory and "the humming-bird chirps in triumph over a defeated rival."[3]

Combat is of great importance among the mammals. Male hares, moles, squirrels, beavers, quanacoes, deer, and other timid animals often fight desperately during the love season. The canine teeth, as with "some antelopes, the musk-deer, camel, horse, boar, various apes, seals and the walrus," and horns, spurs and manes are specially developed for the purpose of combat. The pitched battles of stags are well known, and frequently end in death.

Courting.[4] The courting instinct, although the earliest forms are known among some of the most primitive species, appears to be somewhat more remote from the primary functions and more complexly associated than the instinct of combat considered by itself. There are many instances that make it appear that combat, or the passions based on combat,—anger, jealousy and fear—are very frequently submerged elements in the courting instinct. Courting may be looked upon as a refined and delicate form of combat, which latter may nevertheless often be appealed to as a last resort. The play upon the appreciation of the higher senses and intelligence which constitutes courting tends to become continually more remote from physical combat. And even where physical combat exists, it may really form an element in the courting instinct. It would be very difficult to prove that the real fights ending even in bloodshed do not have a stimulating and pleasing effect upon the female, and in many cases combat appears to degenerate into a mock battle, where the opposing male is

[1] Darwin, *op. cit.*, pp. 260-368.
[2] Darwin, *op. cit.*
[3] Darwin, *op. cit.*
[4] Cf. Tillier, "L'Instinct Sexuel."

either daunted and discouraged or the female influenced in her choice. In both cases the psychical equipment would be of a higher order. Combat by itself does not presuppose nor require any remarkable psychic effect of one sex on the other. Courting, even when resting entirely upon the male, presupposes appreciation or at least some effect of a psychical nature upon the female. The progress of evolution appears to show a movement towards the more irradiated and secondary although no less erethic instinct of courting.

Male bees, wasps, butterflies and moths are generally brighter colored, plainly for the purposes of courtship. In some insects, as with the glow worm, the male alone is provided with wings, and there is generally a superfluity of males, facts which induce either combat or courting. In many of the coleoptera the sexes differ in color, so much that they have sometimes been classified as different species, and they are often provided with protuberances which serve as ornaments.

Among fishes there are many instances of courtship and display. The Chinese macropus expand their fins, which are spotted and ornamented with brightly colored rays.[1] The splendid colors of the peacock labrus, in one species of the genus at least, differ greatly according to sex. In two species of ophidium the "males alone are provided with sound-producing apparatus."

Among frogs and toads it is principally the male which croaks. Sometimes they alone are provided with resonant sacs. The male alligator strives to win the female by splashing and roaring. "Swollen to an extent ready to burst, with head and tail lifted up, he spins or twirls round on the surface of the water, like an Indian chief rehearsing his feats of war."

Male snakes can generally be distinguished from females by their stronger colors. Male snakes are provided with anal scent-glands, which as the males follow the females, Darwin thinks, probably serve to excite or charm. The rattle of the rattle-snakes is used as a sexual call. The crest of many lizards is much more developed in the male than in the female. In the genus satanas the males alone are furnished with a large throat-pouch, which can be folded up like a fan, and is colored blue, black and red; their splendid colors are exhibited only during the pairing season. The changing colors of the chameleon show the increased excitement of the male during the pairing season.

In birds the courting instinct is very well developed, giving distinct and wonderful examples of appeal to the higher senses

[1] Darwin, *op. cit.*

of sight and hearing, and rising beyond the passive pleasure of these senses to a most complex association of sound, sight and movement in their stated dances and parades. Because of the direct appeal to the senses as distinguished from the more irradiated powers of sensibility in general, the courting instinct is more decidedly in evidence among the birds than with the mammals, although it may very well be true, as is indicated by their more permanent affections, that the mammals have a more inner and heartfelt ecstasy, and that their display and appreciation are not so prominent, simply because they are more rapid, deeper, and more penetrating. The wonderful way in which dogs are able to divine their master's meaning, judging from the slightest indication of eye or hand, shows the unobtrusiveness, but no less the effectiveness of their sensibility.

Male birds "are ornamented by all sorts of combs, wattles, protuberances, horns, air-distended sacs, top-knots, naked shafts, plumes and lengthened feathers gracefully springing from all parts of the body." The beak and sometimes the iris of the eye are more brightly colored in the male. The fleshy appendages about the head of the male Trapogan pheasant swell into a large lappet on the throat and outer two horns, which become colored a most intense blue. The African hornbill inflates a scarlet wattle on its neck. The wattles of the turkey cock swell and assume vivid tints while courting. The immense variety and wealth of form and color in the feathers of birds are too extensive and too well known to admit of much detail. The greenfinch, sparling, magpie, stocking-weaver, heath-lark, mocking-bird, falcon, Virginian night-hawk, stone-smacker, blackhead, tufted titmouse, golden pheasant, cock of the rock, bower-bird, and many others have often been cited in evidence of the ecstatic movements and brilliant displays of birds during periods of sexual excitement. Many species of the gallinaceæ give good instances of the power of the courting instinct and the way in which it is related to combat and ecstasy generally.

In the case of the woodgrouse[1] the hens are less watchful than the cocks (because they are spared by the huntsmen), and become quite tame at pairing time. The cock the whole year round is very quarrelsome and is always fighting with those of his own sex, and is very imperious and violent even with the hens. The more amorously he has demeaned himself at pairing time, the more indifferent he becomes afterwards to his mate. Sometimes he falls upon her and injures her without any apparent reason.

The woodgrouse begins to "balz" in the earliest spring, when as yet everything is quiet in the woods. The cocks, who have formerly been isolated, collect themselves upon a certain place, generally a

[1] Brehm, "Thierleben," Band 6, p. 33.

southern slope grown over with underbrush. The hens also in the neighborhood come for the purpose of attending these amorous plays and of obtaining a mate. Both sexes come about seven in the evening, silently except for the whirr, and light upon isolated trees. After the cock has alighted he remains for some moments perfectly motionless, observing everything with the greatest attention, at which time the smallest noise which appears suspicious will cause him to fly off again. If everything is still, he gives a sound something like the grunt of a young pig, which is taken as a sign of good weather by huntsmen, as the balzing will then likely take place in the morning. Sometimes, however, it happens that the cock begins to balz, immediately descends to the ground, struts before the hens found in the vicinity, and ends by covering them. Ordinarily, however, the balzing begins not before the first streak of dawn, *i. e.*, about three o'clock. When the balzing begins, the head is stretched out, the wings somewhat held down and out from the body and the tail raised. During the "rattle" (of the song) the cock customarily runs along the branch on which he is perched; during the "slurring" he bristles up his feathers and twists himself around. But this order is not always followed. There is considerable variation of the "rattle," the "slur" and the "head note," the same cock sometimes changing from one way to the other in the same morning. The first note begins "töd," then follows töd, töd, töd, töd, and finally becoming quicker, töd, öd, öd, öd, öd, until the "head note" "gluck" is uttered, which is stronger than the rest. Then begins the slur. This "slur" lasts 3½ or 4 seconds. Exceptionally some cease with the "rattle" before the "top note," others after it, and others in the middle of the "slur." Every new "slur" excites the bird more and more. He goes up and down the branch, lets his excrement fall plentifully, grasps in the air with one or the other claw, springs from one branch to the other, or "*steht nach kurz*," as the hunter says, and finds himself in a kind of ecstasy, in which everything around him is forgotten. This goes so far that the report of a firearm does not trouble him even at short range. At the "slurring" all woodgrouse are very hard of hearing, but it is somewhat otherwise with sight. The spark of the firearm alarms him. A white handkerchief waved under him causes him to cease in the middle of the "slur" (which seems to be the most ecstatic part). Brehm believes this comparative blindness and deafness are due to the excessive "heat" or sensuousness which moves the bird at this time. When the bird "sings" in captivity, it is observed that during the "slurring," the head and neck are stretched out and the nictitating membrane is half-drawn over the eyes. There is some proof that the birds really hear, but do not regard, *e. g.*, a case where the bird turned his head when a gun went off, but did not cease the ecstatic slur. The birds, too, are very fearless during this whole period, and will run out at men and horses sometimes. When the hand is brought before the bird even in the middle of the "slur," he pecks at it. An old cock will not allow any young one nearer than a circle of about three hundred paces, and fights with any opponent; not unfrequently one or the other is killed. Geyn says young cocks crow very lightly in the neighborhood of an old strong hero of the lists.

The climax of the balzing is just before the sun rises. When there is a moon, the balzing is more vigorous. After the day has fully broken, the cock ceases and joins himself to the hens, which are to be found a short distance around. At times it happens that a female draws near to the balzing cock and invites him with a tender "bak" "bak" to herself. He cannot resist this an instant; he falls

like a stone from the tree, and dances in a wonderful manner upon the ground. Customarily, however, he must seek out the hens and not seldom flies a considerable distance around after them. Once near the hen he balzes and dances, finally covering her as she is cowered upon the ground. How many hens he is capable of covering in a morning is not known, as a cock seldom has more than three or four hens. The hens appear to have more inclination to some cocks than to others, which occasions severe fighting, in presence of the hens and on the ground. In the third or fourth week of the balzing the cocks leave the balzing place and go back to their often distant feeding places, and the hens begin to build their nests in separate places. When food is plentiful in the fall, the cocks go together in troops.

Courting and combat may both become dissociated somewhat from copulation, a fact which harmonizes with the increasing complication and plasticity of the higher functions of the sexual system. Many male animals fight whenever they meet, although their conflicts are more intense at the breeding periods. Pouters are trained to show at the sound of the owner's voice. A cock and a hen are placed in boxes with a partition between. The owner approaches, makes a peculiar call, and raises the partition. "The birds generally put themselves into the best and most striking attitudes. They soon come to associate the sound of the owner's voice with the expectation of seeing their mates, and will begin to fill their globes and strut about with delight." Later on the voice is all that is required.[1]

Mr. Hudson[2] gives us among others the following case of evident dissociation. From the point of view of art, it is interesting to observe that this occurs when the irradiation has become highly complicated and therefore more readily plastic and controllable.

A strange performance is that of the spur-winged lapwing of the same region, which occurs at frequent intervals, especially on moonlight nights, all the year round. These birds live in pairs, but one of a pair, leaving his mate to guard the nest, will rise up and fly to a neighboring couple, where it is welcomed with notes and signs of pleasure. Advancing to the visitor, the receiving couple place themselves behind it. Then all three, keeping step, begin a rapid march, uttering resonant drumming notes in time with their movements, the notes of the pair behind being emitted in a stream like a drum roll, while the leader utters loud single notes at regular intervals. The march ceases; the leader elevates his wings and stands erect and motionless, still uttering loud notes; while the other two, with puffed out plumage and standing exactly abreast, stoop forward and downward until the tips of their beaks touch the ground, and sinking their rhythmical voices to a murmur remain for some time in this posture. The performance is then over, and the

[1] Robert Fulton, "Illustrated Book of Pigeons," p. 126.

[2] "Music and Drama in Nature," *Longman's Magazine*, 1890, Vol. XV.

visitor goes back to his own ground and mate to receive a visitor himself later on.

As we have already noticed, combat is the leading feature of sexual selection that can be readily observed among the greater part of the mammals. To the result of this, however, the female must lend her sanction, and must herself be willing in the most of cases to belong to the conqueror of the lists. When she is not, combat and possession are of no avail. A female could easily avoid union by flight or go off with another male if she so desired, as, indeed, sometimes occurs. The male is frequently in heat when the female is not, and her refusal is then always effectual. The males of dogs are ready for copulation at all times, but union never occurs until the females are themselves in heat.

It seems difficult to tell what the characters are that influence the female mammal in her choice. In contrast with the birds, they are not characteristics which immediately appeal to the outer sensibility. They seem to depend rather on some sort of interpretation of the sensuous impressions and appeal rather to the higher capacities of the brain. Cases, however, are not wanting where characteristics are developed which appear to be of service as sexual charms. Odors, as already mentioned, are of great importance among the mammals. "Large and complex glands furnished with muscles for uniting the sac and for closing and opening the orifice have in some cases been developed." The males of certain antelopes are provided with erectile ridges of hair running along the back, which can hardly be of service as a defense in battle. Many species of quadrumana have very ornamental hairy crests upon the head. The beards of goat and ibex and the whiskers and beards of many monkeys are confined to the males. Many male deer are considerably different in color and possess brighter markings than the females. The young approach the female color, and castration frequently prevents the development of the special characteristic. The voice of the male is generally stronger, and sometimes special sacs are developed which increase the sound, as with some species of deer. With the quadrumana, although the sexes generally resemble each other, there are so many odd and curious variations of form and color that it is difficult to believe they are not serviceable as sexual lures.

As we have seen, the phenomena of courting are exceedingly complicated. On the part of the female, definite courting appears to assume two contradictory impulses, to receive the male and to repulse him. Espinas[1] explains the refusal as a length-

[1] "Die Thierischen Gesellshaften," p. 267 and ff.

ening out of the pleasure on her part. "The following of the males, says he, must awaken in the females a more or less definite image of sexual union." "This pursuing of the males is also in itself a pleasure, and there is no lack of examples in the animal kingdom where a satisfaction is intentionally protracted or put off in order to extend the enjoyment * * *. So the cat plays with the mouse, the otter and cormorant with the fish * * *. For the same reason the females must put off the males because they feel the pleasure of being sought, and are able to wish for the lengthening of this pleasure."

But there are many cases which show that the female is really moved by an underlying timidity, fear, or even dis-like, instead of a desire for pleasure in thus lengthening courting. Very often the female heat is some days or hours later than that of the male. His excitement, expressed in movements of various kinds, is naturally communicable, especially in the higher animals, and the erethism thus flows over from the male to the female. Or, in other words, the instinct of fear and dislike is overcome by love. While males are fighting or displaying their ornaments, the females frequently look on quite unmoved, as with the females of black cock, who walk off into the underbrush, where they have afterwards to be hunted up by the male. Darwin observes that in many cases appearances would lead us to believe that the female selects "not the male which is the most attractive to her, but the one which is the least distasteful." Courting is often continued after all rivalry has ceased, and appears in many cases to help overcome the natural passivity of the female, as we saw with the capercailzie, who runs out from her cover to meet the male.

Fear and Anger. There is, however, more than the demand of the female which leads to courting. If the higher forms of courting are based on combat, as we have already suggested, among the males, at least, anger must be intimately associated with love. And below both of these lies the possibility of fear. In combat the animal is defeated who is first afraid. Competitive exhibition of prowess will inspire the less able birds with a deterring fear. Young grouse and woodcock do not enter the lists with the older birds, and sing very quietly. It is the same with the very oldest birds. Audubon says that the old maids and bachelors of the Canada goose move off by themselves during the courting of the younger birds. In order to success in love, fear must be overcome in the male as well as in the female. Courage is the essential male virtue, love is its outcome and reward. The strutting, crowing, dancing, and singing of male birds and the preliminary

movements generally of animals must gorge the neuro-motor and muscular system with blood, and put them in better fighting trim. The effect of this upon the feelings of the animal himself must be very great. Hereditary tendencies swell his heart. He has "the joy that warriors feel." He becomes regardless of danger, and sometimes almost oblivious of his surroundings. This intense passionateness must react powerfully on the whole system, and more particularly on those parts which are capable, such as the brain,[1] of using up a great surplus of blood, and on the naturally erethic functions of sex. The flood of anger or fighting instinct is drained off by the sexual desires, the antipathy of the female is overcome, and sexual union successfully ensues.

Some animals even seem to play upon this fighting instinct. Darwin mentions the case of a female of the cape buffalo fighting with the male. They pushed each other about quite violently. He observes, however, that the bull never used his horns in a serious way, and could easily have ended the fight if he had so desired.

In their general relationships, the anger-fears and sex seem each to be large systems of overt or partially inhibited reactions, connected with each other much in the same way in which Fig. 2 represents the reciprocal reaction of r and r^1. Within the limits of this article, it is of course not our intention to study the anger-fears in detail, nor to show their equivalence and interdependence with sex, except when and in so far as they are subordinate, and aid in the discharge of the sexual functions.

Sex and Care for Young. Although the function of reproduction is the starting point of both the sexual instinct and the instinct of care for the young, and although the latter of these has added immensely to the complexity of life and to its higher psychological processes, it seems to be somewhat late in the series before these two great instincts can be said to be distinctly connected. The care that many animals exhibit for the product of impregnation does not appear to grow directly from the desire for copulation, and it would be presuming extraordinarily upon the representative powers of the lower animals if we should say that the desire for offspring determined that for copulation. It seems more probable that care for the young grows out of the care of the individual for its own body, and that the offspring, which has been for a time a portion of herself, is defended by the

[1] This would obtain even although the cubic contents of the skull are unchanging—rapidity of circulation taking the place of an accumulation of blood. Cf. Bayliss and Hill on "Cerebral Circulation," *Jour. of Physiology*, Sept., 1895.

mother with a fervor which arises almost directly from the instinct of self-preservation. Natural selection would operate favorably on any such attachment, both on account of the preservation of the offspring and the reaction on the parent, in whom becomes cultivated an experience of wider relationships and a better power of dealing with her environment. The mother that so extends herself to her offspring that she sees for it, hears for it, and provides for it in many ways, becomes herself more highly developed. The parallel development of organs capable of retaining and nourishing the impregnated egg, although they do not appear themselves to be dependent upon the motherly instinct, yet by producing offspring which is larger and more perfect, both add strength to the original feeling of bodily identity and provide a further appeal to the instinct based upon it. Where the instinct of care for the young affects the father also, or devolves entirely upon him, the scource of the instinct must lie in another quarter.

Let us take an example. The male stickleback, whose very violent combats have already been noticed, builds for the female a nest, in some species made of agglutinated sticks, a burrow of stones in others, both of which serve to accumulate the eggs, which are fertilized by the attendant male. After the eggs are fertilized, however, the male continues to watch over them until they are hatched and the young grow of a certain size. His pugnacity serves him in good stead, and enables him to defend the nest against marauders, none of whom are more troublesome than the female stickleback herself, who would readily eat her offspring unless driven off fiercely by the male. How is it possible that the instinct should be developed?

In the first place, as Espinas notes, the eggs of fish must generally be fertilized within five minutes of their emission—otherwise they die. Hence the male fish follow closely upon the issuing ova, which must be frequently in his field of vision, and become an object of attention and regard. That this is so of some fish is shown by the Chinese macropus. "After the male has won his bride, he makes a little disc of froth by blowing air and mucus out of his month," into which he collects the fertilized ova, guards them and takes care of the young when hatched.[1] When the courting of the male has influenced the female stickleback to enter the nest built for her, it is not unnatural that his attention will become directed to the eggs. Indeed, it would appear that this may always be an element, as fish are gen-

[1]Darwin, *op. cit.*

erally ready to eat the eggs and young of other species. The desire must, therefore, be inhibited in the males at the spawning times, at least as far as eggs issuing from the female are concerned. Such a regard for the eggs, handed down for generations, and favored as it would be favored powerfully by natural selection, might very readily issue in the instinct of the stickleback.

It would appear that in this case the instinct of care for the young has grown directly out of the sexual instinct, and may be regarded as an irradiation of it. The percepts necessarily associated with the acts of fertilization, have become the basis of a care which continues after the acts of fertilization themselves have ceased. The instinct of the midwife frog already referred to may have originated in a similar way. With the female of the Surinam toad, who carries her young on her back, the instinct probably originated with the male, since it is he who takes the fertilized eggs and places them in the dorsal pouches, where they hatch. If this action of the male originates as an irradiation of the sexual instinct, the further irradiation to the female is of considerable interest. The habit of the male ostrich, who collects the eggs laid by the female and hatches them entirely by himself, would not seem to be directly connected with the sexual instinct, as these acts are not associated with copulation. They might rather be residua or survivals of a time when both sexes sat upon the eggs, as is customary with many birds. It is possible, however, that this habit itself (of the males helping the females with the care of the eggs and young) may be a sexual irradiation. The instinct having been already established on the part of the female, and when the natural irradiation of the sexual passion in the male has led to the repetition of sexual acts with the same female and the association of impulse and impressions which results in pairing for however short a time, this interest in the female might very readily be extended to the offspring which belongs to her, and which she is so ready to provide for and protect. Espinas notes that among birds it is precisely the least intelligent which abandon the female after copulation. To this they are led, he thinks, by the unassuaged ardor of their passions, and by the fact that they have not been able in the "time too short of a brutal pursuit" to impress the image of the female sufficiently deep to be a means of attachment.

The paternal instinct would not, then, be at the bottom, care for the young, but an irradiation of the characteristically male instinct of sex, through the female to the young themselves. This, however, would generally occur only when development had proceeded to a considerable extent, and

comparatively late in the phylogenetic series, a fact with regard to the paternal instinct which has been frequently recognized. Cases like that of the stickleback or Surinam toad are exceedingly rare, and it is not until we reach the birds and mammals that we have any well marked instinct of care for the young, and in these classes the female undoubtedly leads. Indeed, among many quite highly developed species, as with the capercailzie, the males take no part in guarding the nest or rearing the young. With the paternal instinct, when it has really come in, as with undoubted sexual characteristics generally, there seems to be a great deal of variety and plasticity. In certain species the male may play a very considerable rôle, while in closely related forms he takes no part whatever. Species of grouse, which sometimes cross with the capercailzie, assist the hens in the protection and rearing of the young. The lion trains his pups, while the tiger is said to be eager to destroy them.

In polygamous or gregarious species, the males will easily come to associate the already considerable number of females with the additional young ones, and to extend the interest and protection which he originally owes to his wives to their offspring also. Bulls among wild cattle form a ring with the females and the young in the centre when danger threatens. Stallions do the same. Boars in India defend the herd against leopards and other animals except tigers. Stags protect their families from other animals as well as from males of their own species. With the llamas[1] each troop is composed of one male, with several females and their young. The male grazes at some distance from the flock, and is continuously on the watch. When danger threatens, he issues a warning cry, all the heads are raised, and when there is necessity the herd takes to flight. The females and young go before. The male follows them and often pushes them with his head. If the male is wounded or killed, the females run round him, making a whistling noise, and allow themselves to be killed rather than flee. If a female is killed the herd does not stop.

With many monkeys the strongest male becomes the guide and protector of the band. He demands absolute obedience and enforces it under all circumstances. His subjects are always ready to pay court to him, and apply themselves with the greatest zeal to freeing his hair of troublesome parasites, to which operation he lends himself with a grotesque majesty. In return he watches faithfully over the common safety. He is always the most circumspect. His eyes wander constantly

[1] Brehm, *op. cit.*

from one side to the other. He distrusts everything, and he nearly always succeeds in discovering in time the danger which threatens the troop. Darwin quotes the instance of a band of baboons who had been surrounded by dogs, and who had with difficulty made their escape, "excepting a young one about six months old, who, loudly calling for aid, climbed on a block of rock and was surrounded. Now one of the largest males, a true hero, came down again from the mountain, slowly went to the young one, coaxed him, and triumphantly led him away — the dogs being too much astonished to make an attack." In these cases the male is very jealous and drives away all other males when they arrive at maturity. His care for the young seems to be founded upon his desire for the continuous possession of the female, and is thus certainly an irradiation of the sexual instinct. It is very interesting that in some cases this accessory instinct should be more effective in the protection of the young than the instinct of maternity itself. While the care for the young on the part of the male is, in many cases, a derivation of the sexual passion, this does not hold true of the female, nor is there a reciprocal radiation, except perhaps in man, which places the maternal instinct at the basis, making the desire for offspring lead to a desire for sexual union. On the contrary, in both sexes the desire for union is primordial, and in the male, if the present view is correct, it is also basal, while in the female, care for the young is derived from the love of her own body and is much more independent of the sexual passion.

The Æsthetic Capacity. Whatever variety of different passions play together in composing the final erethic movement of sex, no one can read of the operation of the sexual instinct in the lower animals without being struck with the wealth and abundance of the striking, the attractive, and the beautiful, with which this instinct is closely connected.

Whether these have been wholly produced by gradual selection on the part of the females or not is not necessary to our purpose. There may very probably have been many different agencies at work. The different physiological constitution of the sexes would result naturally in a predominance of bright colors (due primarily to overabundant waste products) and of more energetic movements. It seems, too, very possible, as Wallace supposes, that natural selection would operate in cutting off the less active females of brighter color, while the males would be able to save themselves, and thus propagate their kind. But with the development of the higher senses and the brain, it would seem very unnatura indeed, if the female should not be closely attentive and deeply moved by the caresses, the showy movements, the

gorgeous colors, and the singing of her mate, and that special excellence in their qualities would not have the effect of charming and attracting her and of overcoming her objections to the sexual act.

It has been supposed by some that the bright colors of the males have originated as signs of recognition and that to this they still owe their great variety in closely allied species. But it would seem that animals, as highly developed as the birds and mammals, are capable of recognizing very fine points of difference, especially when the objects concerned are part of their customary experience. Most game birds know very quickly the difference between a man with a gun and a man without. Young chickens make no mistake about seeds found in sand of a very similar appearance. A ram distinguishes another ram immediately from a ewe even in hornless varieties. Wild boars give a different sign to the herd on the approach of a leopard, from that given when a tiger is noticed.

In many cases, too, it is not the parts of the body most easily seen which are the most striking or beautiful. A great many birds are quite dull on the back, but have beautiful markings on the under surface of the breast and wings, as with our common nighthawk. The beautiful ball and socket designs on the under surface of the wing of the male Argus pheasant are only displayed when the bird purposely holds up his wings, which he does when courting, and so on in numberless cases, some of which have been already referred to. There must be a great deal more at work than the necessity the sexes are under of distinguishing each other at a distance. For this, much slighter modifications would suffice, and any increase beyond the minimum would be dangerous in the struggle for existence. It may very well be, however, that in earlier times and yet among more primitive species, a slight difference would be of advantage in enabling the sexes to find each other. If even a small per cent. were more successful on this account, it would tend to perpetuate the characteristic. It has been noticed by many authors in this connection that singing birds are found more frequently in thickly wooded countries and are not brightly colored, while the birds of brilliant plumage are found where they are able to be seen at a considerable distance.

It is to be noticed, also, that bright colors and energetic movements are a sign of health and vigor, and on this account their selection by the female would benefit the species and thus tend to its expansion and survival. This may very well be the *meaning* of these love displays, but we can hardly suppose that the female is capable of such powers of repre-

sentation as to enable her to understand this relationship. When she chooses, it is not because she realizes that her mate is the most vigorous, but simply that he is the most pleasing. In brightly colored species, *e. g.*, it will be the sign and not the thing signified which occupies her attention. Indeed, it will not be a sign to her at all, but simply the stimulus of pleasure and delight. Even with the mammals, with their greater capacity of interpretation, and their advance beyond the simple appeal to the outer sensibility of eye or ear, and although their movements in courting and combat are more directly the expression of health and vigor, it is surely not willingly on this account that the female exercises her choice. These movements must appeal to her simply on æsthetic grounds. They are directly felt to be pleasing and attractive. Even among mankind the countless impressions with which we are surrounded, crowded with meaning as they are, are nevertheless much more frequently taken simply for themselves than for the meaning which lies behind them. That we are pleased by a certain act is sufficient. It is only rarely that we desire to know its full significance. No doubt that in the operation of natural selection, mankind, as well as the animals, attach the greatest importance to events which are significant of others directly bearing on their welfare. But this significance is felt and acted upon long before it is measured. There even comes to be a sense of significance when that significance remains unknown, a repulsion, or a delight, in that which seems to have some deep and everlasting meaning, and which doubtless has it, however distant it may be from the consciousness of the individual at the time. The countless manifestations of beauty may very readily be signs of something more, but there is no evidence which shows that, with the exception of man, these are ever valued in such a way. The process of nature is much more simple, and rests upon sensuous perception, and the feeling of attraction or dislike arising directly from it. According to this view, however, the appreciation of the beautiful and the reality which lies behind it go hand in hand. "What, indeed, is beauty," says Espinas, "if it is not organization become sensible, life become manifest?"

In the appreciation of the beautiful as thus understood, we must not suppose that the female alone is interested and that the male confines himself to its production, and to the effect of this upon the female. The males are exceedingly sensitive, perhaps more so than the females, to the prowess of other males. The young cocks of many grouse keep at a distance when they hear an older and stronger cock. The young nightingales are not able to sing well the first season, and

gradually learn the accomplishment from the older birds. The males of passerine birds arrive at the nesting places often days in advance of the females, but sing, nevertheless, with great zeal. With the gallinaceæ, generally the singing and display are carried on among the cocks themselves, and when the females are at a distance. This display, as we have already suggested, probably has the effect of daunting other birds as well as warming up individual courage. A slight increase of color or size of feather, or more energetic movements, would be very easily associated with a sense of mastery, and the animal who appreciates this more readily saves himself from defeat, and possibly finds another mate, by whom he sends down his greater sensitiveness to the next generation. He has at least a second chance in the struggle for a mate.

It seems, then, quite possible that selection among the males themselves may lead to an increase of beauty, and even to the appreciation of it on their part. That this beauty is feared rather than loved is at least nothing against its power of fascination, and its really being recognized as beautiful. The charm that serpents exercise on some birds, and the possibility of charming snakes themselves, show the capacity of this kind of fatal fascination. Early races were in the habit of wearing, not ugly, but often beautiful things, for the purpose of striking terror into the hearts of their enemies. The nodding plumes of the Greeks and even the military costumes of the present time are cases in point.

But whatever the agencies at work, the primary relation is clear. The sexual instinct in its irradiation upward and through its increasing dominion over the higher senses and the brain, has given rise to a distinctly æsthetic capacity, capable of appreciating the beauty of form, color, movement, and sound, issuing in whatever way from the bosom of life and expressive of its sweetest harmonies as well as of its depth and power.

Courting Instinct in the Lower Races. The study of the sexual instinct in early man is somewhat difficult of approach. We are cut off from any direct observation, and the historical remains of even the oldest races do not begin to go back to the savage state. The study of the lower races of the present time is certainly instructive, but one is liable to be misled by the fact that these races do not stand in the line of progress, and in some cases are distinctly degenerate types. The light thrown upon early times by archæological remains and by the survival and transmission of ancient rites and customs, reveals an abundance of material suggestive indeed, but

equally difficult to interpret. Between the highest of the apes and our earliest knowledge of man there lies a gap, no wider perhaps than between many other species, but in which we have a more than ordinary interest. As to sexual characteristics, there have come in some important modifications. The periodic breeding season, with the exception of slight traces, has disappeared, and sexual union is possible throughout the year. This physiological fact has decreased the periodic intensity of the sexual passion and placed it more under the control of the higher intellectual and emotional powers. That domestic confinement has the same effect on the apes and on some of the lower animals shows this to be connected, probably in a reciprocal manner, with the advancing social condition. The same thing is shown by the statistics of births, where the increase of conceptions in April and May is found to be greater in the country than in the city.[1] The more secondary sexual characteristics have also changed considerably. The difference between man and woman is said to be greater than between the sexes of most of the quadrumana. In the later maturity of the male, his greater size, larger brain (absolutely) and greater sensitiveness, strength and courage, stronger voice, greater prominence of the superciliary ridge, and sometimes of the sagittal crest, greater hairiness and better developed beard—generally of a lighter tint than the rest of the hair,—man differs from woman in the same way that the male of the quadrumana differs from the female. The secondary sexual characteristics vary greatly with different races. Flat and hooked noses, broad and long faces, high, receding, or broad foreheads, well rounded occiputs, black, red, yellow, and white skins, long or abundant hair, or none at all, leanness, fatness, squinting eyes, enormous ears, protruding buttocks, and breasts long enough to throw over the shoulder, are natural features found in various quarters of the globe, and where they exist are esteemed as beautiful, are preserved by sexual selection, and often enhanced by artificial means.

The courting of the lower races has in it, to our eyes, very little of either love or beauty, but it is very different to the savages themselves. Their rude dances, their tattooing, their ornaments, the display of their persons and their clothing are to them a matter of much importance.

Most savage men[2] take pride in the hair of the head. Now it is painted in a showy manner, now decorated with beads and tinsel, now combed and arranged with the most exquisite care. The Kandhs have their hair, which is worn very long, drawn forward

[1] Westermarck, "Human Marriage," p. 69.
[2] Westermarck, *op. cit.*

and rolled up till it looks like a horn projecting from between the eyes. Around this it is their delight to wear a piece of red cloth, and they insert the feathers of favorite birds, as also a pipe, comb, etc. The men of Tana of the New Hebrides wear their hair twelve and eighteen inches long, and have it divided into some 600 or 700 little locks or tresses, and among the Satuka a man requires a period of from eight to ten years to perfect his coiffure. Tuckey states that on the Congo both men and women shave the head in ornamental figures.

Among the Set-htas in Indo-China it is the unmarried youths that are profusely bedecked with red and white bead necklaces, wild boar tusks, brass armlets, and a broad band of black braid below the knee. Speaking of the Encounter Bay tribe of South Australia, the Rev. A. Meyer says "that the plucking out of the beard and anointing with grease and ochre (which belong to the initiatory ceremony) the men may continue, if they please, till about forty years of age, for they consider it ornamental, and fancy that it makes them look younger and gives them an importance in the eyes of the women." "In Fiji," says Wm. Anderson, "the men who like to attract the attention of the opposite sex don their best plumage, and when Wm. Bulmer once asked an Australian native why he wore his adornments, the native answered that he wore them in order to look well and to make himself agreeable to the women."

But although these outward adornments, in the lowest races at least, are probably more frequent with the men, it is not long before the women are equally anxious to add to their natural charms. Bancroft tells us that young Kadiah wives "secure the affectionate admiration of their husbands by tattooing the breast and adorning the face with black lines," and in another place that the Nahua women used paint freely to beautify their persons. "Among the Aztecs, they painted their faces with red, yellow or black color." They also dyed their feet black. Hands, neck and breast were painted, and their teeth were cleaned and painted with cochineal. The Nahuas also had a passion for loading themselves with ornaments, the more valuable being legally restricted to the better classes of society.

"Among the Makalolo the upper lip is perforated and a large metal and bamboo ring called a pelelé is worn in the hole. This caused the lip, in one case, to project two inches beyond the tip of the nose, and when the lady smiled the contraction of the muscles elevated it over the eyes. 'Why do the women wear these things?' the venerable chief Chinsurdi was asked. Evidently surprised at such a stupid question, he replied, 'For beauty! They are the only beautiful thing women have; men have beards, women have none. What kind of a person would she be without the pelelé? She would not be a woman at all with a mouth like a man, but no beard.'"[1]

[1]Livingstone quoted by Darwin.

It would go beyond our space to describe the different methods savage races have adopted in order to beautify their persons. Teeth are knocked out or filed like saws, the head is shaved, hairs plucked out, eyebrows shaved and eyelashes pulled out, the skull is compressed, feet are squeezed and lengthened, or shortened by doubling up the four smaller toes, ears, noses, lips are loaded with rings and daggers, ear-lobes are dragged down until they approach the shoulder, breasts are cut off or made to project unnaturally, warts, scars and ridges are raised upon the skin, which is also painted, dyed or tattooed. Modifications of the sexual organs themselves are frequent and remarkably persistent among the habits of the tribe. Common practices are those of infibulation and circumcision. The nymphæ and clitoris are lengthened, the glans penis is pierced by needles and provided with ampullæ, artificial hypospadias are produced,[1] the penis is split or covered with hairs, prickles or other instruments. There seems, indeed, to be no part of the body free from some attempt at improvement.

Tattooing, which generally takes place at puberty, is a very chosen form of mutilation, and sometimes gives rise to a quaintness or beauty of design pleasing to any eye.

In Samoa, until a young man is tattooed he could not think of marriage, but as soon as this was done he considered himself entitled to all the privileges of mature years. "When it is all over," says Mr. Pritchard, "and the youth thoroughly healed, a grand dance is got up on the first available pretext to display the tattooing, when the admiration of the fair sex is unsparingly bestowed. And this is the great reward, long and anxiously looked forward to by the youths, as they smart under the hands of the matai * * *." When Merteus asked the natives of Sukunor what was the meaning of tattooing, one of them answered, "It has the same object as your clothes—that is, to please the women." Bock remarks, as the Wyak women are tattooed to please their lovers, so the Laos men undergo the ordeal for the sake of the women.[2]

Ploss states that tattooing around the middle of the body comes in earlier in the history of some tribes than tattooing of other parts. The women of the Ponapé and the Tahiti islands tattoo themselves especially in the neighborhood of the vulva. After this come the breasts, the abdomen and the extremities.[3] That tattooing is used for the purpose of sexual attraction there seems to be no room for doubt, but that it originated in this way is not so commonly conceded. Wundt, Gerland, Frazer and others believe that religious ideas or totemism is the original source, others think that

[1] An operation Remondino suggests for civilization.
[2] Westermarck, *op. cit.*
[3] Ploss, "Das Weib."

it is done to render the person operated upon terrible or invincible in battle. Ploss is of the opinion that it is due to modesty. Some of these causes, however, are not at all remote from the sexual instinct. Modesty, if it is really present, is distinctly a sexual attraction, especially on the part of women, while success in battle is no less so on the part of men. With many races a man is not permitted to marry, nor would he be accepted by the women, until he has killed a certain number of enemies. War is very rarely undertaken for the sake of food or territory; the possession of women is the constant source of conflict between the tribes. Nothing could be more natural or more attractive to the fair sex than tattooing, which would represent their lover's prowess as well as please in a merely decorative way. It becomes a sign of a man's ability to protect his wife and family—to render their love secure, and must, therefore, be a powerful auxiliary in successful courting. The very same signs would have an equally daunting effect in battle. His opponents would fear to stand up to a man bearing such evidences of success. It is not wonderful, then, that tattooing would be found to make the warrior invincible, and might easily come to be resorted to even when not representative of former courage and address.

But although some such mental representations are very probable, yet there is no reason to suppose that beautiful, terrible or significant signs or objects do not also have a direct instinctive effect. After the preliminary displays, brandishing of weapons, boasting, vaunting and cursing, calling upon their gods and despising those of their opponents, have been duly gone through, and the enemy thus given plenty of opportunity to reflect, the more fundamental, and at the same time instinctive, part of the business still remains. In the heat of the conflict, with its necessity for rapid, energetic action, the older, more hereditary instincts have full play, and here, as with the lower animals, the beautiful and the terrible approach each other. The brightest colors, the most gorgeous banners and the most brilliant music have always had an exhilarating effect upon warriors and soldiers of every time, and no doubt an equally depressing one upon their enemies.

Among the lower races, too, the women follow their husbands and lovers to battle, their cries ring in the contestants' ears and incite them to their bravest deeds. After the battle the women become the prize of the conquerors, and sexual gratification, while the participants are still under the influence of the fight, in most instances ensues immediately. Frequently, especially with the lowest races, the women are

not unwilling captives, and would not leave their masters if they could. Victory has had upon them all the effects of a most successful courtship. In cases like these there must be an instinctive association of anything striking, or terrible, or beautiful with both the fear and passion of the fight as well as its culmination in sexual contact.

The connection of tattooing with totemism and religion may no doubt be found. But what is the position which religion occupies among the lower races? Does it not represent a residue of old experiences, a vapor which has arisen from the past, and, like the ozone of the sea or the miasma of a swamp, still penetrates the present with its influence? The heroes of one period, do they not become the gods of the next? The rites and ceremonies, the doctrines of to-day, are they not the memories of living thoughts and deeds of days gone by? To say that religious ideas are the source of any custom is only to refer one to the past, where the problem begins all over again. Not that religion may not sanctify, keep alive and modify a custom, and that at a given period the only reason known for a certain act is that it is religious, but that religion does not begin as something formal and arbitrary, but roots itself on deep biological tendencies, on thoughts and images, instincts and passions, whose neural paths are already a highway for physical and mental activities. It seems much more probable that tattooing began as a sexual attraction, when we already find so many instances of it, and that it afterwards became attached to religion, purified to an extent, and brought into contact with a wider circle of associations.

Even when religious, it does not always, if ever, lose its sexual significance. The Tahitians have a tale that tattooing was invented by the two sons of their god Taaro when they wished to seduce their sister. These two sons became the gods of tattooing. "Their images were kept in the temples of those who practiced the art professionally, and every application of their skill was preceded by a prayer addressed to them, that the operation might not occasion death, that the wounds might soon heal, that the figures might be handsome, attract admirers, and answer the ends of wickedness designed."[1]

The tattooing found so frequently on the bodies of criminals of the present day is not generally so beautiful as that of the savage races, although the connection with sex is sufficiently close.[2] There is not the same sensitiveness shown

[1] Ellis.

[2] Cf. Laurent, "Les Habituées des Prisons de Paris."

in the suitability of the design to the place it is intended to occupy. The lines are not, as in much of savage tattooing, made to follow the surface of the body. It has lost its decorative character and become more purely representative. In this it reflects the higher development of art and the advancement of civilization, but only in a formal way. The ideas which have led to this advancement and are contained in it are here entirely absent. Moreover, there is no reason why the most representative graphic art should not also be quite satisfactory from a decorative standpoint. The masterpieces of modern art have found a way to satisfy both demands. But the tattooing of criminals is not an art as was that of the savage races. It is lacking in appeal to the beautiful, nor is it either terrible, expressive, or even comical.

Clothing. From tattooing to clothing is an easy step. As Professor Mosely says:

> A savage begins by painting or tattooing himself for ornament. Then he adopts a movable appendage, which he hangs on his body and on which he puts the ornamentation which he formerly marked more or less indelibly on his skin.

The variety of material used for clothing indicates the activity of the fancy and the desire for decoration. A simple shell, a string of beads or shells, a thin fringe of fibres or leaves, empty egg-shells, or even a thread tied round the middle or under the arms, often forms the whole dress, which is frequently only adopted at maturity, or worn upon special occasions.[1]

> Tasmanian dances were performed with the avowed intentions of exciting the passions of the men, in whose presence one young woman had the dance to herself. During these dances the women wore a covering of leaves or feathers, which was removed directly afterwards.[2]

From a large number of similar cases Westermarck concludes that the feeling of shame is not the origin of the adoption of clothes, but that in many cases, at least, "men and women covered themselves to make themselves more attractive—the men to the women, and the women to the men." When all go perfectly nude, he says, "nakedness must appear quite natural, for what we see day after day makes no special impression upon us. But when one or another—whether man or woman—began to put on a bright colored fringe, some gaudy feathers, a string with beads, a bundle of leaves, a

[1] West of Tanganyika the people go naked, but by a manipulation of the fatty tegument of the lower body in childhood, they produce an apron which hangs down almost to the middle of the thighs. (Schurtz, "Philosophie der Tracht," p. 21.)

[2] Westermarck, "Human Marriage."

piece of cloth, or a dazzling shell, this could not of course escape the attention of others: and the scanty covering was found to act as the most powerful obtainable sexual stimulus. Hence the popularity of such garments in the savage world."

These facts undoubtedly show the closest connection between clothing and the attraction of the sexes as Westermarck points out, but it is not to be understood by this that clothing itself is, normally, a direct appeal to passion. Simply to attract attention to the sexual organs can, surely, not be the whole of the purpose. For this, a gesture, the mere exhibition of the body, the simplest expression of desire, would be much more effective. The brilliant colors, the odd and curious forms of primeval dress and ornament, must have the effect of awakening mental processes which intervene and tend to postpone the sexual climax. They must represent a margin, an overflow, which engages the attention with something else than immediate gratification. The primary effect will be to momentarily withdraw the sexual impulse when that is present, and to allow of an irradiation where the mind is engaged with visual sensations not primarily the sign of sex. That the wearing of bright objects is believed to have the effect of warding off danger, is shown in their use to avert the evil eye, which is often only a synonym for an uncontrollable sexual passion. By the use of such objects the attention is directed rather to the personality than to the person, which is always sufficiently plain. It is an attempt to display psychical rather than physical features. The bit of ornament is an expression of an inner state, of a sensitiveness higher than the crude though powerful sensations of sex, and it is for this reason that it becomes at last an attraction and may be preserved by sexual selection. Ornamental clothing is not a simple lure. It is a sign or symbol of a greater refinement of perception and delicacy of feeling, and the man or the woman who gives the best evidence of these qualities is the one who is chosen by members of the opposite sex who possess such qualities themselves. The attraction is in the mind and not in the sexual organs.

But if higher considerations do not inhibit its activity (and here also we see the value of a margin), and the sexual instinct is to obtain its culminating satisfaction, the wider irradiation by spreading an erethism throughout the higher centres of the brain, will, by its reaction on the system, only aid in arousing and strengthening the natural performance of the sexual function. The objects of beauty may then very readily under the influence of passion at white heat become identified with its pleasure and satisfaction, and apart from the representative effect of which we have already spoken

become instinctively connected with purely sexual feelings. When, however, this instinctive connection leads the rest, the sexual instinct has lost its highest potentiality, has retreated and fallen back upon its centre, and although it may be more concentrated and rank, is also more easily defeated in the struggle for existence. This difference between a symbolism which is alive and growing and one which is only instinctive, is the difference between art on the one hand and a degraded fetichism on the other.

Shame, Jealousy, and Fear. Let us now turn to another phase of the question of clothing, where we find a symbolism more of a moral than an artistic nature. Jealousy, as we have already seen, is very frequently an underlying feature of the passion of sex, and far from being sloughed off with advancing development, has gradually shown itself more plainly in the higher species. The institution of marriage, both in man and in the higher animals, especially in the quadrumana, is largely ascribable to its influence. Schurtz[1] is of the opinion that the feeling of shame in the human species is connected with jealousy and an outcome of social development. The desire of the man for complete possession has given rise in the woman to a desire to conceal and protect what is regarded as valuable. He gives instances which indicate that people who are habitually naked, yet show the effect of shame, and occasionally hide the sexual organs. He states that in the most of cases, and the exceptions are those of the lowest races, it is the women who are more carefully covered, and he thinks that the use of clothes which begins with the sexual organs is the "outer expression of a specific human morality." He points out that it is the married women who are the most frequently and most completely clothed. That the dress, however scanty, is the recognition of this condition, and the sign of its approval by the tribe, an indication of the fact that the wife belongs to one man; "that for other men she exists no longer as a woman, but only as a human being." Schurtz mentions as other possible sources of the use of clothes, the need of protection from weather, flies, and small injuries, the desire for ornament and decoration, and the desire to distinguish classes or individuals, by way of trophy or princely signs. He regards the æsthetic ground as the least probable of any of these sources, and says that the sculptor, who knows much more than these uncivilized people of the tropics what beauty means, does not cover up the naked body, but unsuspiciously reveals it—that he would find it the greatest prudery to be untrue to nature, and that we never find the

[1] "Die Philosophie der Tracht," p. 17.

purely natural ugly, so long as influences from other sources do not work upon our feelings, *i. e.*, that there shall be no sexual stimulus. When, later on, he speaks of clothes in art and particularly in sculpture, he says that the figure here does not come under the same laws as in reality, that in art, clothes may be used as an ornament or as a means of expression, but not as a covering. He also admits that although clothes are originally used as covering, and therefore more by the women than the men, it is just with the women that, later on, they become more highly decorated and serve as a means of attraction.

The weakness of this theory lies in the fact that it does not account for the wearing of clothes by men, and if the lowest races represent the earliest stages, it would appear, according to Schurtz's own admission, that men began to use clothes first. But as to the priority of their possible origin, we are not for our purposes particularly interested. Whichever is first, all of them are actually found as causes for the use of clothes. The mere starting point, a very difficult thing to determine, is of much less consequence than the natural trend of the associations. It may very possibly be that different tribes originally used dress for different reasons, but the question is, having adopted it, do they not lay great stress upon it as a means of beautifying themselves, rendering themselves attractive or producing an impression of value and importance, especially conducive to success in love? The feeling of shame itself, with its derivatives, modesty on the one hand, coquetry on the other, is undoubtedly a great attraction, tending to satisfy and allay the jealousy which underlies the sexual passion.

From a consideration of the facts it seems reasonable to take the view that men and women adopted dress for different motives—the man originally for the purpose of decoration and attraction, the woman for the purpose of a covering. In this the sexes are true to the characteristics they have shown throughout the animal series. The feeling of shame is not originally a male quality, nor deeply rooted in the sexual instinct regarded by itself. It is related rather to fear and an outcome of self-preservation, conservative in its tendencies, and characteristic of the female diathesis. This does not prevent its having been selected by the males as a result of their rivalry and jealousy of each other, nor its transmission by heredity to the males themselves. It is clear that like the other foils of the sexual passion, shame must be overcome by love before the culmination of the final act. The jealousy on the part of the man, the fear to offend this on the part of the woman, of which the concealment of the person

may be an expression, would have no meaning but for the sexual instinct, and the possible gratification thereof which has called them forth. No doubt the feeling of shame is a specific human morality, but it has its origin in sex. It is made to be overcome, and the acts of display, of attraction and ornament, which tend to affect this purpose must be a deeper and more fundamental expression of the sexual instinct, which however only shows its strength and range as it becomes more widely irradiated. As Mantegazza says:

> The more one simplifies love and reduces it simply to a connection between two persons of opposite sex, so much the less easy is the development of jealousy and the less complicated is the sensuous ceremonial. The more it is surrounded by the feelings of shame, coyness, secrecy, and obscure and undefined ideas, the more full of sensation and tenderness becomes the whole mechanism, but also the more easily broken.[1]

The moral and the æsthetic values of clothing are thus not really opposed. Both, as irradiations of sex, increase each other's effect. The delicate and even severe morality of the present day in matters of dress, probably tends to accent, if it makes more rare the æsthetic sensibility, as well as the keenness of the sexual feeling from which it is derived.

Symbolism and Fetichism. In their estimation of what is beautiful and attractive, savage races are greatly influenced by the smallest and finest distinctions. Of the thousands of possible beauties which such an organic structure as the body might present, they pick out one or two to which they pay attention, while they neglect the rest. A view which is able to grasp the harmony of the whole and knit together the greatest variety of detail seems impossible to them. One tribe will insist upon some few characteristics which it sets up for admiration, while an adjoining tribe, with almost the same material to work upon, picks out characteristics and originates manners and customs entirely different. It seems as if, at all costs there must be emphasis, there must be a focus, whether that is situated so that its penumbra takes in the greatest possible remaining beauty or not.

The religious spirit is equally close and narrow. A stick or a stone which differs but unimportantly from many another, is seized upon, its differences magnified in the imagination by the very act of attention, and set up for adoration. The turning of a feather will determine an expedition. The doing of a thing at a certain time and in a certain way without the deviation of a hair, and many more such whims, fears and superstitions, present the same psychological features.

[1] Anthropologish-cultur-historische Studien über de Geschlechtsverhaltnisse des Menschen, p. 39.

This fetichism is of course not absent in the lower animals, but in man it reaches a fineness and discrimination to be found nowhere else. It depends primarily upon an increase of the psychological process of representation, involving greater powers of comparison and analysis as compared with the lower animals. The outer impressions come to be clearly distinguished as such, but at the same time are often treated as symbols of inner experiences, and a meaning read into them which they would not otherwise possess. Symbolism or fetichism is, indeed, just the capacity to see meaning, to emphasize something for the sake of other things which do not appear. In brain terms it indicates an activity of the higher centres, a sort of side-tracking or long-circuiting of the primitive energy. It is not the mere sensuous impression of the crooked stick and the attendant reflexes which have control. This impression has given rise to another process, which for the moment dominates the brain, and under whose influence it actually neglects what is more immediate and apparently more real. The stick itself becomes the symbol for this peculiar and otherwise expressionless experience, and it is set up as a fetich or a god. Once having obtained this focusing power, the advancement of humanity is determined by ever-increasing improvements in its adjustment and its range.

As already stated, it is neither in the absence of sexual excitement nor in the very height of it, that the margin making possible the formation of a fetich or sensuous symbol, occurs. Movements capable of leading up to the climax are more productive in this respect. Particular movements of the dance, particular decorations have their origin here, and tend to become symbolic and fetichistic. J. Donovan,[1] in "Festal Origin of Human Speech," speaks of the absorptive power of sensation under festal excitement. "We must not lose sight of the absorptive elements of sensation, the regular movements of the body, the rhythmic sounds of sticks and stones, the rhythmic and articulated cries. It is, perhaps, impossible to estimate too highly the value of this absorption for enabling the festal excitement to mould the natural passions according to its own tendencies instead of being destroyed by them." Rosetti's poem, "The Woodspurge," gives a concrete example of the formation of such a symbol.

> "The wind flapped loose, the wind was still,
> Shaken out dead from tree and hill;
> I had walked on at the wind's will,—
> I sat now, for the wind was still.

[1] *Mind*, July, 1892.

Between my knees my forehead was,—
My lips, drawn in, said not Alas!
My hair was over in the grass,
My naked ears heard the day pass.

My eyes, wide open, had the run
Of some ten weeds to fix upon:
Among those few, out of the sun,
The woodspurge flowered, three cups in one.

From perfect grief there need not be
Wisdom or even memory:
One thing there learnt remains to me,—
The woodspurge has a cup of three."

Here the otherwise insignificant presentation of the three-cupped woodspurge, representing originally a mere side current of the stream of consciousness, becomes the intellectual symbol or fetich of the whole psychosis forever after.

It seems, indeed, as if the stronger the emotion the more likely will become the formation of an overlying symbolism, which serves to focus and stand in place of something greater than itself; nowhere, at least, is symbolism a more characteristic feature than as an expression of the sexual instinct. The passion of sex, with its immense hereditary background, in early man becomes centered often upon the most trivial and unimportant features, which are often not at all representative of profound biological affinities, such as are without doubt the bright colors, beautiful voices, etc., of the lower animals. The mutilations, the tattooings, the rites of puberty, the dress, the ceremonies so rigidly insisted on as a preliminary to sexual gratification, indicate, however, a psychic advance. This symbolism, now become fetichistic, or symbolic in a bad sense, is at least an exercise of the increasing representative power of man, upon which so much of his advancement has depended, while it also served to express and help to purify his most perennial emotion.

While this is an account of the inception of a symbol or fetich, after this has once been established it is not necessary that there should, especially among the majority, be much if any conscious reference to its significance. Its effect on the sensibility is assured by heredity and social custom. It may even lose its meaning, or become loaded with a meaning much larger than was originally intended, while at the same time it becomes more in harmony with the basal æsthetico-physiological demands of the retina, the ear, or the sense of movement. Plenty of our conventional designs have had just such a history, as well as many of the words and gestures which we unthinkingly or superstitiously use.

Phallicism. The necessity of human nature to focus attention upon something which becomes a sign or symbol of other things more important than itself, played a great part in the early phallic religion. Here was an attempt, immense, profound, to envisage the whole of a scattered experience and give it form.

Phallicism is not a religion characteristic of the very lowest races. In Africa to-day it is strong with the Dahomeyans, among the sturdiest races of the blacks. It lies back of Aryan history. The Bibles of the world imply it, as do much of present rites, ceremonies and sacramental costumes. The legend of the Holy Grail and the noble figure of Sir Galahad have descended from it.

It seems strange that the worship of the generative organs, and particularly of the male organ, should be the natural continuation of that instinct for the beautiful which, as an outcome and irradiation of the sexual passion, we have already observed in operation with man and the lower animals. But no one can understand phallicism who fails to observe how closely interwoven it is with society and the gods. It is no private cult, nor does it depend merely upon free sexual selection and the rivalry of individuals. It is a great idea, able to constrain the hearts of thousands. This is the source of its beauty as well as of its usefulness in the struggle for existence among warlike nations. As a great idea it bound the people together and summed up an immense circle of outward irradiation. Ancestor worship, tree and serpent worship are phases of phallicism. The goat, bull, serpent, tench, turtle, domestic cock, scarabæus, dove, pig, lotus, the constellations, the moon and sun with fire its earthly representative, heat and moisture, pyramidal stones, artificial obelisks and pyramids, uprights generally, from which have probably descended our church steeples, the globe, the cross,[1] and many other forms, as symbols of death and life, generation and regeneration, are interchangeable with the human phallus.

Lajard[2] traces phallicism to its oldest known forms among the Chaldæans. Their philosophy was, in a word, the universality of generation. Everything waxes and wanes. Periodicity is the world-law. Sexuality is its expression and

[1] Count Goblet d'Alviella ("La Migration des Symboles") takes the view that crosses are cosmogonal, the four arms symbolizing the four directions. As a sign of the weather they would come to be a token of health and good wishes. This is not contradictory to a phallic interpretation. As we shall see, phallicism could not become a religion until it became cosmogonal, and in that sense universal.

[2] "Culte de Venus."

its most important typical phase. The oldest god is male and female in one : the bearded Venus, the heavens and the earth. It was by the division of this mystic hermaphrodite that the sexes were formed and Venus Pandemos became Venus Aphrodite and Hermes or Priapus. The original human being was also bisexual, and afterwards divided by the gods into man and woman. This first state was one of quiescence, symbolized sometimes by the egg, from which everything comes.

By comparing all the varied legends of the east and west, we obtain the following outline of the mythology of the ancients: It recognizes as the primary elements of things two independent principles of the nature of male and female: and these in mystic union, as the soul and body, constitute the Great Hermaphrodite Deity. THE ONE, the universe itself, consisting still of the two separate elements of its composition, modified, though combined in one individual, of which all things are regarded but as parts.[1]

Associated with this bi-sexual philosophy of things, originating contemporaneously, or derived from it, is a trinitarian explanation, which is also essentially phallic in its symbolism and application. When the original unity became divided into powerful separated deities, it still seemed to maintain a certain existence in the minds of believers, first as a general ground of existence and afterwards as an independent personification. The sun in some religions is entirely masculine ; Baal and Molock are characteristic Semitic forms; but in many cases in the sun became concentrated the three persons of the Deity. These were distinguished as the creating, the preserving, and the destroying powers. In Hindostan, Brahma, Vishnu, Siva ; in Persia, Oromasdes, Mithra, Ahriman ; in Egypt, Osiris, Neith, Typhon.[2] These forms are more philosophical and later phases of phallicism, and, although they absorbed the strength of the earlier phases, yet often left them behind to continue their hold upon the imaginations of the lower classes. In case of any conflict it was always open to the leaders to identify their more cultured art and religion with the cruder forms. The worship of Juggernaut, or the great creator, as the word signifies, for example, goes back to the very earliest times. This god is worshipped in the form of a bull, which is identified with Taurus of the zodiac. According to Higgins, Inman,[3] and others, his worship has been carried on from the time that the sun in the vernal equinox was in the first degree of Taurus, 6,600 years ago. After passing through Taurus, the sun appeared in

[1] Corey's "Fragments."
[2] Godfrey Higgins, "Anacalypsis," p. 13.
[3] "Ancient Faiths."

Aries, which also, with its earthly representative, became a phallic sign.

The sacred word, Om, is a symbol of the Hindoo trinity. It is in the original spelled with three letters, and, as Higgins[1] says, it would be better expressed in English by Aum, Aom, or Awm. The first letter stands for the creator, the second for the preserver, and the third for the destroyer. Sir W. Jones says that the mystical word Om signifies the solar fire. In an old Purana we find the following passage: "All the rites ordained in the Vedas, the sacrifices to fire, and all the other solemn purifications shall pass away, but that which shall never pass away is the word Om — for it is the symbol of the Lord of all things." Higgins thinks that this word is found in the Greek *omphi* (an oracle) or *omphalus*, which is related to the Latin, *umbilicus*. It will be remembered that the Hindoo devotees, while repeating their sacred word, sit with crossed legs gazing at the navel. The position is also physiologically in harmony with a half ecstatic abstraction.[2] The word *triomphe*, repeated in the Dionysiac festivals, is *triom-phe*, *i. e.*, the triple *omphe*, although this might be repeated in Greece without any idea of its origin or meaning than that of its being a sacred word. Inman believes that the word John with its synonym Jack are of phallic origin, the first form of John being IO or ION. He identifies the O with the *kteis*, or female organ, I, the upright, with the phallus. The Hindoo word YONI, the emblem of the female organ of generation, is another form of it. Jack is a form of Iacchus or Bacchus, the sun god, and belongs to the male side of the symbolism. Both words were used in the revels of the Eleusinian mysteries, which were descended, as Plutarch suspected, from very ancient times, and were probably survivals of the spring festivals of savage people, in which sexual excitement is such a prominent feature. In Greece and afterwards in Rome, these mysteries became the occasions of the wildest orgies. Maids and matrons ran wildly through the woods, naked or clothed in skins, with serpents in their hair. They carried with them sexual symbols, flourishing torches, which continued to burn when plunged in water. They tore animals to pieces in their fury and ate the flesh raw and quivering. In the festivals in honor of the reproductive powers of nature, held in Rome in the month of April, "the Phallus was carried in a cart and led in procession by the Roman ladies to the temple of Venus outside the

[1] *Op. cit.*, p. 126.

[2] A return to the position of the embryo.

Colline gate, and there presented by them to the sexual parts of the goddess."

With the advent of Christianity these ancient feasts were re-edited and made to speak more purely, if more abstractly, of reproduction and immortality, generation and regeneration. The higher elements of religion and art, the sentiment for nature, and religious adoration characteristic of the spring, would seem to have lost to a very large extent their sexual content; although the intensity of feeling and emotional depth which accompany these higher manifestations, proclaim themselves as the natural transformation of the primitive energy of sex. The preliminary fasting, the repression of the sexual instinct during the time of Lent, the determination of the date by the changes of the moon, a female symbol, besides many popular customs, *e. g.*, the eating of eggs, of hot cross buns, also show how much the new form has been dependent on the old.

The story of the fall is referred to in the history of many different nations, and told in many different ways, which are yet essentially similar to the account given in our own Bible. In many of these cases there is an undoubted phallic reference. According to the Persian legend, "the first man and woman were seduced by Ahriman under the form of a serpent, and they then committed 'in thought, word and action the carnal sin, and thus tainted with original sin all their descendants.'" Wake[1] says "eating the forbidden fruit was simply a figurative mode of expressing the performance of the act necessary to the perpetuation of the human race — an act which in its origin was thought to be the source of all evil." The serpent is continually associated with phallic symbols, and becomes itself a phallic sign. The cobra of India is said to copulate while standing upright in the double twisted form, represented in the Caduceus of Mercury. Wake[2] says that the Phœnicians supposed that the serpent had the quality of putting off its old age and assuming a second youth, connected probably with the casting of its skin, a quality which was made use of in typifying generation and eternity.

This short account of the symbolic side of phallicism will suffice to indicate its great fertility and resource. The symbols we have been dealing with, although they represent the spirit of a past religion, are in themselves forms of art, productions, inventions, which appeal directly to sensibility, whatever other content they may possess. Sculpture, architecture, the graphic arts and poetry in no less degree, were

[1] Westropp and Wake, "Ancient Symbol Worship," p. 39.
[2] *Op. cit.*, p. 45.

the channels through which they flowed and by which they have come down to us. The rites and ceremonies are often but the abbreviated remains of a presentation essentially dramatic. The sacred words are concentrated poems, and are received and felt by devotees with a corresponding ecstasy.

But there is another side of even greater consequence, the emotional and active side, and it was the union of this with an intelligible symbolism that made phallicism what it was. The relationship that exists between these two is very much the same as that which obtains between money and wealth. The formal and intellectual side is of no value apart from the wealth of feeling, emotion, sense of value and worth, which it expresses and renders more easy of manipulation and exchange. The value of symbolism to the sexual instinct lies in its capacity to utter the vast and unknown past that wells up in every man who feels and thinks, and at no time more poignantly than under the influence of love. How, then, did phallicism play upon or express these original and voiceless powers?

In the first place, indistinct and complicated symbolism itself effects the more irradiated portions of the imagination, and favors a filling of reverie, mysticism, and other sensuously tinctured lesser emotions, which lead naturally, in the healthiest natures at least, to the complete vigor of the sexual passion. But there is no place in which phallicism shows its depth and range more distinctly than in the way in which it exploits the associated passions of fear and anger, and through them intensifies the upward recoil of confidence, faith and love. Death is constantly brought face to face with love in its most ecstatic condition. Says Higgins[1] of these early times, "Everywhere throughout all nature the law that destruction was reproduction appeared to prevail," and that this (a very suggestive point) led as its natural outcome to the belief in the transmigration of souls. The worship of the serpent was particularly characterized by these cruel and terrible excitements.

The representations of Kali, the goddess of nature and fecundity, may be taken as an example:

> She is entwined with serpents; a circlet of flowers surrounds her head; a necklace of skulls; a girdle of dissevered human hands; tigers crouching at her feet,—indeed every combination of the horrible and loathsome is invoked to portray the dark character which she represents. She delights in human sacrifices, and the ritual prescribes that previous to the death of the victim, she should be invoked as follows: "Let the sacrificer first repeat the name of Kali thrice, Hail Kali! Kali! Hail Devi! Hail, Goddess of

[1] Anacalypsis.

Thunder! Iron-sceptered, hail, fierce Kali! Cut, slay, destroy! Bind, secure! Cut with the axe, drink blood, slay, destroy!" "She has four hands," says Patterson, "two of which are employed in the work of death ; one points downwards allusive to the destruction, which surrounds her, and the other upwards, which seems to promise the regeneration of nature by a new creation."[1]

Conversely, it is to be noted that the æsthetico-sexual erethisms are perhaps the only producers of devotion and sacrifice, which still, as in phallic times, imply a reference to death. Sacrifice for religion is still possible, and there are yet students of beauty who starve on a crust for the sake of art.

Phallicism in the minds of these early people had in it nothing indecent. As Payne Knight says, the act of generation was considered as a solemn sacrament in honor of the Creator. In some countries it was performed by the priest or prince before the assembly of the people. The virgins participating in the act were highly honored. Many, in fact most, of the ancient temples and surroundings were favorite places for sexual congress. When the gods allowed the birds this privilege within the sacred precincts, it was thought the act could not be displeasing to them. Accordingly doves were often associated with the temple worship. In these temples troops of women were kept for the purpose of ministering to the sexual needs of the devotees. They were often the most beautiful and the most highly honored in the land, and a great distinction was made between them and the prostitutes who sold their bodies for their own gain. The children of these unions were brought up in thetemple and the best of them were used in its service.

Dulaure says that these customs overcame the excessive rancor of war between different peoples, (strangers being frequently favored) and that they made the nation more numerous in a time when numbers were of the greatest importance.

Despite its cruelties, phallicism was essentially a religion of reverence and love. Ancestor worship and the love of fatherland which springs from it have their roots in phallicism. The Greek Lares and Penates were the rude representations of male and female organs of departed ancestors. They were placed over the fire-place, because fire represented the sexual flame or life, "the engenderer of the heavens and the earth."[2]

Even the serpent himself, the most venomous and deadly of beasts, gets tamed beneath its influence, and becomes the symbol for wisdom and healing.

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[1] "Ophiolatreia."

[2] Cf. Jennings, "Phallicism," p. 286, and Forlong's "Rivers of Life."

The crucified (brazen) serpent, adored for its healing powers, stood untouched in the temple, until it was removed and destroyed by Hezekiah. . . .The sacred snake of Athens had its abode in the Acropolis, and her olive trees secured for her the victory in her rivalry with Poseidon. The health-giving serpent lay at the feet of Asklepias, and snakes were fed in his temple at Epidauros and elsewhere.

The old terror worship tended to die out, and it is in the higher forms of religion that we find the serpent lingering longest as a symbol of beneficence. It still remains with us as one of the insignia of the medical profession, and in the marriage ring. As with other forms of art the tendency has been to eliminate the less permanent pleasure-giving features, which become less and less in harmony with a higher civilization.[1] It is not darkness, snakes, and gore, that are the objects of fear to the modern man, and against which his courage may rise to intoxication. His terrors are more intangible and on a higher psychical plane. The vast irradiations of society and the difficulty of finding one's niche, the fear of insanity and disease, and of the incalculable effects of heredity, of losing one's grip, the dread of the slightest jar in the ideal harmony of two loving souls, the immense weariness in presence of that strange destiny of the universe in whose presence the best effort seems wasted,—these are the weird terrors, typical of the modern man, and before which both generating and regenerating love are too often overthrown.

Modern Phallicism. The question naturally arises, has phallicism any message for the present times? No vital religion has neglected the sexual nature, of which with all the "jenseits" it is originally an irradiation. It is only in periods of weakness and decadence that these extremes become opposed or dissociated. In this respect it is to be doubted if modern civilization has succeeded in increasing the advantages of a stimulating and purifying solidarity inherited from the past. Early Christianity was not nearly so negligent. Its combat with preceding religions forced it to take practical cognizance of the rankness that underlies all nature, and it was not for many centuries that the attitude of the church became purely negative and ascetic, nor until Puritan times that these qualities became the possession of the people.

A return to phallicism, as we see it historically, would be like modern tattooing, an art of criminals, which could never be the equivalent of the original vital thing itself. The same instincts, however, still exist, and if unhandled by the natural leaders of society, become atavistic and reactionary. The

[1] Cf. Marshall, "Pain, Pleasure and Æsthetics."

Puritan repression is too self-centered. The purity that does nothing more than keep itself unspotted from the world, is unsuited to our growing wants and larger social consciousness. What we need at present is a modern phallicism, a religious and artistic spirit that goes out to meet the sexual instinct, and is able to find in it the centre of evolution, the heart and soul of the world, the holy of holies to all right feeling men. We need the manly courage and noble love which are able to protect and to enshrine the beautiful body and soul of woman, able to be faithful in the perilous days of youth to her dear image, shining yet as through a glass, but darkly, a fidelity able to keep this dim and evanescent imagination like a charm against coarse seductions. This ideal we need to base upon the facts of biology and history. No abstract dream will stand the strain of our present knowledge of the world, nor the intimate experiences of married life. This *joi de vivre*, like all the irradiations of sex, must be an outcome and an overflow of our present actual circumstance.

Some of our best literature shows a dawning of this idea. Goethe's Faust is strongly sexual. The witches' kitchen in which Faust drinks the rejuvenating draught which enables him to see a Helena in every woman that he meets, is typical according to Goethe's admission in conversation, of the influence of sex. The outcome of the whole drama might be summed up in the words—to adopt Bayard's translation: "Ever the womanly lifts, leads us on." The French poets are admittedly sexual, sometimes atavistically so. De Musset boasts in one of his lyrics of having sung "*la rouerie*" to the young men of France. Swinburne in a much more pessimistic way had at one period a similar tendency. Tennyson appeals with appropriate delicacy to the tenderest of sentiments. Of 120 poems in a volume of selections of Browning, sixty-three are sexual in subject.

But it is not necessary that art should deal with this problem in so many words. Passion is better touched by an unseen hand. Suggestiveness that reaches to the subconscious regions is deepest of all. So we find many poems and other art works, which without a word of sex are simply embodiments of its movement, and have a similar effect upon the feelings. The very essence of everything lyric in poetry, paint, or music, is the heart-bursting overflow of love, and it strangely follows even in its form, the play of the successive moments of a sexual passion. When a poet sings as the bird sings because he must, like the bird, he can not fail to embody the erethic qualities of sex. That he may be unconscious of the biological source of his enthusiasm, is at

least no argument against its existence. Browning in his "Women and Roses" gives us an example of what is meant. The first five stanzas follow an emotional crescendo, which is filled with beautiful, vague and mystic images, and overflowing with tender words. The fifth stanza breaks through all reserve:

> "Deep as drops from a statue's plinth,
> The bee sucked in by the hyacinth,
> So will I bury me while burning,
> Quench like him at a plunge my yearning;
> Eyes in your eyes, lips on your lips!
> Fold me fast where the cincture slips,
> Prison all my soul in eternities of pleasure,
> Girdle me for once! But no—the old measure,
> They circle their rose on my rose-tree."

In the following and closing stanzas, Browning irradiates the passion and carries it upwards to the stars. The effect here is of course dependent on the matter as well as upon the form, and is so clear that it seems as if Browning must have been distinctly conscious of the principle.

Many technical forms, *e. g.*, that of the sonnet, with its slow and measured octette, its more rapid, impassioned, and variable sextette, show a similar spirit, as does the movement of many musical compositions, even when the musical content is not directly amorous. Although it is not so transparent to the most of observers, the aim of painting is also lyrical. The joy of the artist in his work, and the embodiment of that joy in his productions, is the largest factor in successful painting. The go, the snap, or the larger and steadier enthusiasm which takes longer to appreciate, is all upon the canvas for every one to read. The mere portrayal of objects, mere drawing, is the crudest thing a painter has to do; color and the mystery of tone, so thoroughly dependent on health and mood, are the essence of his activity. Brush-work, instead of being an art for artists, becomes the most intimate expression of life within the painter's grasp, and is, as may be supposed, the last and most difficult art to be attained, without sacrificing more fundamental and basal qualities. In this respect, the aim of painting, as some one has said, is to express everything with two dots and a dash. It is here that the first weariness is detected, so destructive to all art work. A recent painter is said to have practiced for several months till he could express the wet rim of a cart-wheel, reflecting sky and trees, and quite of a character of its own in form and

texture, by one large sweep of his brush—a *tour de force* which is not lost upon the sympathetic observer.[1]

With the assumption of the reflex arc as the unit at the basis of our psychic life, it is not difficult to state these interrelationships of art and sex in physiological terms. Let us suppose *srm* to represent such an arc, in which *sr*, *sr* are two afferent nerves; *r*, the reservoir of energy or nerve cell, and *rm*, the efferent nerve leading to the muscle *m*. In order to make the diagram as graphic as possible, I have represented the reservoir *r* with a curved outlet of large capacity, capable of being emptied only when *r* is filled, and, in the present state of neurology, it will do little harm if the arrangement is pictured somewhat after the manner of a hydraulic siphon apparatus, which is filled from *s*, *s* and emptied at *m*. To carry the comparison farther, if we suppose that there is a certain amount of evaporation or leakage from *r*, we shall have an illustration of the failure of a repeated stimulus to produce a reaction when the time elapsed has been too long. The emptiness of the reservoir will represent fatigue, and a soakage inwards will stand for the effects of nutrition. The narrow channels, *sr*, *sr*, forcing water into *r*, will represent the effect of a stimulus. This will then represent what occurs with the primitive sexual as well as with any other form of simple reflex. If *r* is already well nourished, or in a full, almost overflowing condition, it will take very little stimulus from *s* to fill it up to the point of discharge. If the stimulus is slight or the cell comparatively exhausted, it must be repeated at short intervals or with increased intensity to produce the same effect.

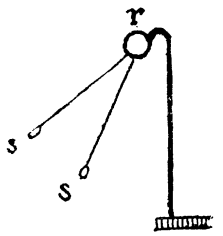

FIG. 1.

Further important characteristics of nervous reactions imply the development of a system and the addition of other connected cells (possibly by induction, as the work of Golgi

[1]It is interesting to observe the way in which the modern novel (which is to be regarded as essentially a form of the drama) provides the associational frame-work for the sexual passion. The more vulgar and most salable forms pass quickly on the most insufficient pretext, judged from a realistic standpoint, from one phase to another of passionate declamation, interlarded frequently with descriptions of terrible accidents, of plots, murders and other scenes which play upon the auxiliary emotions of fear and anger. The better class of novels in attempting a deeper analysis of life still appeal to the passion of love, even when that subject itself is ostensibly omitted.

and Cajal would indicate). In the diagram (Fig. 2) another motor cell of less capacity, but with more highly differentiated, less somatic sensory avenues, is united to the first by a fibrous connection. In the language of our comparison, another reservoir has been added. It will now be more difficult to fill r from the direction of s, s at least, as there is a completely developed leakage to r^1, but when both reservoirs are filled and both discharged, the effect will be greater, representing more muscular and glandular elements brought into play. If the influx to r is rapid, it will be capable of being discharged alone and before r^1 is filled (owing to the small capacity of the fibrous connection), but the discharge will not be so copious nor the results so effectual as if r^1 had been used. Moreover, if r^1 is not brought into play it will leak back into r, and there will be another discharge sooner, and, if r is stimulated rapidly again, weaker than if r^1 had been properly fatigued. This will represent the relationship between the fundamental sexual functions, erection, discharge of glands, etc. (r), and the more irradiated parts of the system (r^1) when copulation is the aim in view. The ideal curve of the whole activity will be slow and high and consequently of infrequent occurrence. It will rise gradually and fall rapidly, while the partial activity will be rapid and more frequent. The curve a, Fig. 3, will represent the first, b the second. The irradiated portions (r^1), however, are not always used in the interest of sex. The cell r^1 is capable of being stimulated by its own sensory avenues (s^1, s^1, s^1), and, if this is rapid and frequent, discharge of r^1 may occur without leakage to r. In such circumstances the overflow of r will fill up r^1 and increase its capacity to discharge, while its own action is thereby postponed or inhibited. These two reaction systems represent the relationship of sex and art. In a highly developed system, however, this relationship is mediated by countless possibilities of reaction or motor cells. The secondary sensory apparatus becomes highly developed, particularly in the eye and

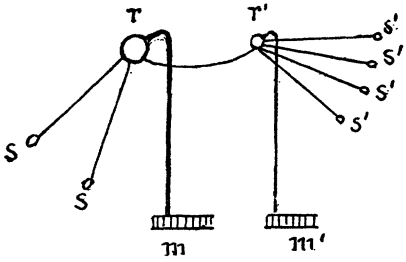

FIG. 2.

s, s^1, sensory end organs.
m, m^1, muscles or glands.
r, r^1, reservoirs of energy or nerve cells.
sr, s^1, r^1, afferent nerves.
rm, r^1, m^1, efferent nerves.

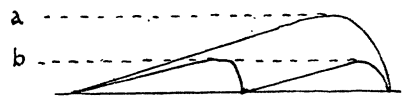

FIG. 3.

ear. With the development of the brain, an association system becomes possible and the sensuous phantasy comes to take its place as the most irradiated portion of the psyche, not excluding even the primary sensations of the eye and ear. The accompanying diagram will show a way in which this radiation may be supposed to have been carried out. The action of r^1, r^2, etc., represents the form of action, which is characteristic of all the senses which bring us in contact with the outer world. It is quick and recovers easily. Normally, the eye and ear are always ready. The more somatic activity of sex, on the contrary, reacts powerfully, and does not recover to its full extent for a considerable time.

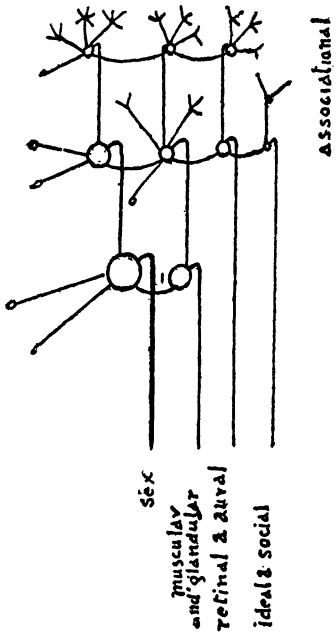

FIG 4.

The outer senses, too, and their intellectual derivatives are used for the most part symbolically, and with reference primarily to the inner and somatic sense, that euphoria of which the sex instinct is the best marked active outcome. When the outward senses become detached from their emotional background, as if the connection between r and r^1 (Fig. 2) were destroyed, their action becomes mechanical, while the underlying instincts, in the present case that of sex, either dwindle through lack of use, or discharge weakly without the assisting relays of the higher functions. An activity of the outer senses and the intellect, which is in close connection with the emotional background is the best arrangement for both. The higher senses and the intellect, however, act better prodromal to or independently of an actual sexual passion. That is, they act with a quicker reference to the outside stimulus peculiar to them. Under the influence of passion, although their energy may be as great, their stimulus and discharge are subordinated to the more somatic functions of sex.

General Features and Laws of Courting. Let us now turn our attention to some features of the sexual functions by which they are related to the general problems of life and the interaction of individuals. When a cell reproduces by division, both of the parts do more work in growth and assimila-

tion than before. Preliminary to division, as is most clearly shown in the protozoans, the cell gives evidences of disruptive tendencies. It has become so large that neither absorption nor excretion can be carried on with facility; it is necessary that its mass should be diminished with reference to its surface. Sometimes division occurs spontaneously; at other times, and more frequently, conjugation is necessary, as if the decided increase in size were a condition precipitating division. At this period, as we have already seen, katabolic changes and consequent evolution of energy are characteristic features. The tendency to destruction precedes division, and it would appear that the orderly carrying out of a disruptive process in division were the means which nature has adopted to overcome the necessity of death. It is at the moment of approaching exhaustion and imminent destruction that a cell divides, preceded or not by conjugation, and transmits the life which it is unable to retain. With the metazoan the case is not essentially different. Here the individual margin is greatly widened, but it is endowed with instincts inexplicable from the individual standpoint, leading it to shape its existence as if it were the bearer of a life more important than its own. An extension of the individual margin seems to follow only when there occurs some improvement which makes it more useful to the movement of the race. From this point of view, the individual appears as a debt which is owing to the reproductive processes in which life becomes eternal. Die to live, is at least one side of the law of sex.

The reproductive erethism is, thus, at the same time the result of high nutrition and the expression of decay. Physiological chemistry indicates that the products of assimilation rise in chemical complexity under favorable conditions found in the body. As the complexity increases they approach the critical point, where, with a slight change in the conditions, a new compound might be formed, but without which the already complicated molecules break up on the slightest shock and descend to simpler compounds. Life, and the sexual passion as its highest point, may thus be compared to a fountain, in which the water rises to a certain point,[1] falls over, and breaks up in every direction. The point of highest vitality is just before the beginning of decadence. The period of reproduction is the highest point of the curve, in which the anabolic and katabolic conditions are closely correlative, and are almost indistinguishably passing, one into the other. The anabolic is, however, more fundamental, and a pre-supposi-

[1] Cf. article on "Physiology," Ency. Brit.

tion of the latter. Accordingly, the male who is normally katabolic is just one step in advance of the female, who represents more persistently the inheritance of the race. Conversely, with the female, a more katabolic condition is always possible. We accordingly see, even among species when the male normally courts, instances when the female shows her ability to play a katabolic rôle, which has not been heretofore used by herself or her female ancestors. At the reproductive crisis, the female is just about to pass into the disruptive and explosive condition in which the male is, normally, already found.

Fear, a characteristic female emotion, becomes anger in the male diathesis. When fear and anger do not rise to a complete discharge in their own field of activity, like any outcome of nutrition, they fill up and strengthen the sexual passion, which flourishes only as it is able to absorb, use up, or overcome their fundamental energy. Without a certain preliminary erethism of fear followed often by anger, the sex potential could not rise to the height to which it does, and there would be less likelihood of the old hereditary channels being filled up and rendered productive in the sexual excitement, and less opportunity for the margin which results in sexual selection.[1] The examples of animal courting already given, and the more extended irradiated courting of phallicism, are evidence of these facts, and we have further confirmation of them in the phenomena of perversion.

The greater similarity of constitution of the two sexes in the sexual culmination, helps to account for their mental as well as physical *rapport*. The female is morally and mentally impregnated as well as physically by the superior energy of the male, just because she is on the point of passing into the energetic state herself, and, under certain circumstances, actually does so first. This also helps to account for the carrying out of selection on the part of the females. The female understands and appreciates the excitement of the male because there is already a similar tendency in herself. But while the constitutional symptoms are traveling in the same direction, the advanced condition of the male causes a difference at any given moment in the more representative or intellectual parts of the psychic states peculiar to each. With the lower animals, for example, the male reacts more quickly to the stimuli of food and climate and thus comes into heat sooner than the female. The periodic tension of the semen in man is to be regarded as a comparable hereditary

[1] Compare what has already been said under the head of Fear and Anger.

expression of these seasonal stimuli. The phantasy of the male seems to be more closely connected with his somatic condition, and under the influence of his stronger passions issues more quickly in a motor discharge. He therefore shows less calculation or selection, and is below the female in merely intellectual ability. It is a matter of frequent observation that men more frequently than women throw themselves away in a union beneath them.

The female, on the other hand, at the beginning of courting has before her the excitement of the male, which is interesting to her because she is approaching the same condition herself. There must, therefore, be a mental representation or imagination which re-echoes her own dawning emotion, but which is some degree in advance of it. This is in terms of the excitement of the male, which becomes the symbol for, and expresses the meaning of, her rising emotion. So, in sexual intercourse, the pleasure of the female may be largely the echo of that of the male, and yet her pleasure be none the less real. This has sometimes been referred to as sacrifice, but, if so, it is as amenable to the pleasure law as anything else. Here comes in the pleasure that is taken in pain. In many cases a woman loves to be hurt in a sexual relationship, if there are thus awakened representations of pleasure, often in terms of what is seen or felt as belonging to another, but which serve nevertheless, in normal cases, to awaken the inward movement which results in her katabolic climax. The initial stages of courting come, then, by association to draw the others into activity. They have a meaning, become symbolical, and may be fetichistic, as, for example, are the particular points, peacocks' spots, ball and socket ornaments, etc., so finely discriminated and emphasized in sexual selection. With the most of species this fetichism runs towards increasing the beauty and splendor of the male. Such a tendency is deeply rooted in the constitution of women, although the emphasis here, as we should expect in the human race, is moral and psychic as well as physical. The women of the Samogyan States do not believe they are loved by their husbands until they have received a box upon the ears.[1] In parts of Russia the woman collects and keeps in order the rods with which she is beaten. A stranger marrying a woman of this race found her unsatisfied and complaining to him that he did not love her. She requested him to beat her, after which she was contented and happy. Michelet[2] says in effect that in the first years of marriage, the young girl looks

[1] Krafft-Ebing, "Psychopathia sexualis," 7th ed., p. 140.
[2] "L'Amour."

to her lover to develop her love and mould her life. In this period he lays up permanently in her character a part of himself, which will react on him in later life when he comes to depend on her more as nurse and friend. The Provencal burden (translated by Swinburne) shows a similar trend:

> "Nay, slay me now; nay, for I will be slain,
> Pluck thy red pleasure from the teeth of pain,
> Break down thy vine ere yet grape-gatherers prune,
> Slay me ere day can slay desire again!
> Ah God, ah God, that day should be so soon!"

And Browning in a higher sphere of feeling:

> "Be a god and hold me
> With a charm!
> Be a man and fold me
> With thine arm!
>
> Teach me, only teach Love!
> As I ought,
> I will speak thy speech, Love,
> Think thy thought—
>
> Meet, if thou require it,
> Both demands,
> Laying flesh and spirit
> In thy hands."

It is in line with this phase of the psychology of woman, and in consequence of the physical attractiveness being largely left to her, that objects which excite a man's desire are often, if not generally, the same as those affecting woman. The female body has a sexually stimulating effect upon both sexes. Statues of female forms are more liable than those of male forms to have a stimulating effect upon women as well as men. In phallicism, says Rosenbaum,[1] the Lingam is an expression of male egoism and not physically attractive to either sex. The evidence of numerous literary expressions seems to show that under the influence of sexual excitement a woman regards her body as made for man's gratification, and that it is this complex emotion which forms the initial stage, at least, of her own pleasure. Her body is the symbol for her partner and indirectly for her, through his admiration of it, of their mutual joy and satisfaction. If a fixed idea or cramp should occur in this part of her phantasy, we would have a perversion similar to Masochism.

Corresponding to these features in the female, we find an unreflecting and active diathesis in the male. With the lower animals there is frank and undisguised display of their beauty

[1] "Geschichte der Lustseuche im Alterthum."

and prowess, a masterfulness which frequently amounts to cruelty. There is rarely, if ever, docility; as an attraction it would be wasted on the female. In man this is still the deepest tendency, and when fetichistic is evidently the basis of Sadism.

These characteristics of male and female courting tendencies are fundamental and form what might be called the first or primary law of courting, viz. :—

I. The male is physically active, but non-reflective, the female is passive, but imaginatively attentive to the states of the excited male.

Built upon this, however, and not really contradicting it, in some species, and in man particularly, there comes to be slighter tendencies in both sexes of an opposite nature. This is sometimes expressed by saying that men are becoming more like women, women more like men. This possibly may occur by way of degradation, but there is also a normal movement, involving a higher development, which arrives at a superficial resemblance at least.

With the restrictions of civilization, an imaginative radiation is greatly favored. Before marriage the woman begins to be hedged about. It is regarded as right that she, or her parents for her, should have the option of whom she shall know. Before the introduction, and in her general appearance afterwards, she spares no pains in making herself attractive, appealing to the taste of men in her manner, style, and dress. If the fashions originate with the Parisian demimonde, as Moll says,[1] there must be here a distinct appeal to the sexual taste. Woman comes to occupy the first stages of attraction, and to specialize on the physical aspects of beauty as being less important to the peculiar character of the human race.

Corresponding to this there is less physical activity, relatively at least, on the part of the male. The larger mental capacity, as well as the restrictions of civilization, favor the development of his representative powers. He comes to imagine how the woman feels, and becomes submissive and docile, waiting for the initiative of some one else. Chivalry becomes developed. Self-repression is necessitated. Fashionable society, with its delicate appreciation of manners, or good form, lives almost entirely in this sphere. All this is simply an evidence of a highly developed condition, which, irradiating into other departments, makes the difference between the savage and the cultivated man. In sexual congress itself, the increased representative powers of man make a dif-

[1] Cont. Sex. Empfind., p. 148.

ference. He has already passed through the relatively anabolic state, and knows by recent experience to what it leads. He is intellectually interested in its development, and the states of the female come to be, reflectively, the symbol and outward record or expression of his passion. To see and feel these secondary signs of emotion, to the more intellectual at least, are often of the greatest importance, and may even become, abnormally, so dissociated as to afford the whole means of gratification, instances of which we see in Masochism and inversion in men.

Data like the foregoing give us the material for a secondary law of courting, which normally operates only as an accessory of the first, viz.:

II. The female develops a superadded activity, the male becoming relatively passive and imaginatively attentive to the psychical and bodily states of the female.

In the operation of these laws in the life of love, both in the large rhythm of a whole life and in the shorter wave of a single sexual passion, the secondary tendency of both sexes acts as if it were marginal at the end as well as at the beginning, as in the flow and ebb of the tide, and with each of its waves, the water passes over the same ground twice. When the primary tendencies and the central sexual functions are exhausted, the more irradiated portions have had time to recuperate. The true, or at least the highly developed lover does not push away his mistress as he would the walnuts and the wine. He has an increased sympathy with her, and is more at her disposal than before. He occupies for a time the more feminine attitude characteristic of the secondary law in man. The same thing is true of advancing age and of the approach to maturity, the secondary or more highly irradiated tendency is more active in both. When r, r^1, etc., is exhausted or not yet active, the more irradiated portions absorb the nourishment (see Fig. 4). In the child the irradiated imaginative portions of the sexual system, corresponding to appreciation of art and nature, are in partial operation at least, before the advent of physical capacity.

Since in the full operation of the sexual passion the primary tendency is normally stronger, it follows that the male and female are not on equal terms. As a result of her greater coolness, selection falls naturally to the female, but it is like the selection of a guide to an unknown country, whom she must trust implicitly and follow blindly. Man is naturally more responsible than woman for the outcome of the sexual passion and all that depends upon it, and should be more the master and the guardian of woman's virtue and welfare than she can possibly be herself. It is an instinct of cowardice

that permits to woman equal rights, and, therefore, equal responsibilities in such a matter.

It is in line with this that man has for thousands of years been selected sexually, largely for his practical capacity, his active and moral powers, his sense of responsibility, than for his beauty. It is his capacity to admire, not coldly, the beautiful in woman, an active power, rather than his presentation of it himself, which is gratifying to woman and is normally selected by her. As Jennings says, the beauty which attracts sensually even women must be of the feminine order. Man rather than woman is the typical artist, since the production of art implies active admiration, although its appreciation quite consistently belongs more peculiarly to woman.

One thing remains to be said, which, if space permitted, should be more completely dealt with. If woman is the divinity of human love, it yet must be *one* woman who is the symbol of this faith. This is not merely a restriction of morality, but an outcome of desire. The widened consciousness of man demands it. He is now capable of taking in his whole life in one far-reaching impression. He is no longer merely the creature of the seasons. He does to-day what he knows will bear fruit in years to come. He feels that it is a paltry life that is made up of repetitions. So in love, he chooses forever, for better or for worse. Along with this comes a widening in the character of woman. She is no longer without a soul, as the polygamist believes. She becomes capable of development, so that, as the Greeks suggested in the story of Peleus and Thetis, in one woman a man marries the changing variety of the race. The advance of humanity towards monogamy has been an incomplete expression of this desire. The repetition of initial stages, as with polygamists, legal and otherwise, give no real development. The meaning of the world, and of love its best solution, is never reached or even named. The love of the modern man demands its systematization[1] in a single individual, who may become a symbol more than a complete realization both to herself and her partner of the mystery of love and the consequent enlargement and uplifting of all humanity.

With normal individuals it is, of course, the proper interrelationship of the courting laws that is the important feature. The *beau ideal* of a manly character, for example, is sometimes expressed by the phrase, "the iron hand in the velvet glove." Such a conception represents the harmonious operation of the courting laws, which, in a high state of civilization, are to be looked for in almost every department of life.

[1] Cf. Gaston Danville, "Psy. de l'Amour," and Max Dessoir in "Zur Psychologie der Vita Sexualis," in Zeitschrift für Psychiatrie, Bd. 50.

Degeneration. The phenomena of decadent sexual life indicate, no less than the history of irradiation in the past, its great range and complexity, its consequent plasticity, and its preëminent liability to injury and failure. A comparatively slight change, such as that involved in domestication, shows itself first, both in plants and animals, in the decadence of the sexual functions. This is in harmony with the fact that these functions occur only when the individual has come to maturity, and that they are, during this period, the expression of a metabolism which has arrived at its highest condition, and is thus ready to become kinetic and productive. It is evidently an advantage for both the individual and the race that the sexual functions should occupy such a position, and that reproduction should be the result of the highest individual vitality.

We have already seen that the superior organs of the genital system and their nervous attachments stand between the fundamental reproductive organs and the general system. Goltz shows that with frogs, after the ablation of the hemispheres, this centre is in the receptacules seminales and not in the testes. Where a rutting season is not found, as is the case with man, this tension must play a more subordinate rôle, although even here, with numbness of the higher centres, the lower will occupy their place. The sexual system in man is so much more highly irradiated and more complex that a term in that system considerably higher up would be the natural point of connection between it and the rest of the organism. It appears to the present writer that this pivot has come to be in man entirely psychical, and that it must be identified in a general way with what is commonly called the imagination, meaning by this no mysterious faculty, but simply the higher, more representative and symbolic reactions not directly connected with nutrition. We have already observed among the lower animals traces of the evolution of this phantasy. At first touch, then smell, then the higher, more symbolic sensations of sight and hearing, and finally mental representations, are the means used for bringing the sexes together at pairing time. In man, the imagination comes to be the normal organ of stimulation, with the full and free operation of which pleasure is intimately connected. It is, moreover, by means of this channel that the distantly connected activities of the body as a whole are called into the liveliest exercise.

It is, nevertheless, a very natural thing that the somatic sensations of the sexual passion, the thrill of pleasure that really belongs to the whole body, should be ordinarily objectivized and focused upon the already heightened

sensations of the particular sexual organs. Cases of priapism, however, show that the mere sensations of the surface are insufficient to give pleasure. The ejaculation centres must also be brought into play. But even when the spinal genital centres operate harmoniously and the sexual act is completely carried out, there still may be lack of pleasure and satisfaction. There may even arise disgust and misery. In such cases, very often the general somatic stimulus has been small; the heart beat, the thrill, the intoxication has been wanting, which, when it occurs, no doubt also increases the particular sensibility of the special sexual organs. Cases, however, present themselves plentifully, especially in the clinical literature of this subject, where pleasure of the most profound somatic character is experienced without any direct stimulation of the sexual organs whatever; where there is even a horror of coition, which is looked on as a beastly and degraded act. The pleasure here is often objectivized and focused upon some other sensation, at times apparently remote from those of sex. Sensations in different parts of the body, amounting often to pain, or the touch, odor, sight, sound, or imagination of various objects, serve to stimulate and carry into activity the whole force of the sexual passion. In the most of such cases, the history of these focalized sensations shows that they are in themselves originally indifferent, and only assume the importance they have, because they have been brought into contact, often at an early age, with the more somatic experiences to which they refer.

Unfortunate cases in normal life give evidence of the same character. Sexual union without exalted love or without the highest degree of love of which the individual is capable, such as may occur in prostitution or in loveless marriages, must leave a feeling of disgrace and dissatisfaction. The sexual organs may be exhausted, but the brain remains untouched. An irritation, founded on a deep longing for the discharge of these higher functions, remains—a sadness and sometimes anger supervenes, which, in morbid cases, may rise to an uncontrollable degree. The best of women, through the various arts in which they are frequently skilled—music, dancing, conversation, and the play of finished manners and address — have known how to call into healthy function the subtile but persistent irradiations of the sexual passion. When the imagination is touched, the heart is opened up, and the whole soul and body respond to their utmost depths. It is under this rebus that we should place the desire for a strong sensation, either given or received. The slightest sensations seem strong under profound somatic

excitement, since they are the outer focus, and therefore the expression of the whole condition. In order to repeat this pleasure, the individual desires again its objective expression, which appears to him the important part of the condition. The fact that this does actually tend to produce the pleasure sought for, is no evidence that the sensation has had a mechanical and assured effect like that of heat or light or sound. Its suggestibility may fully account for all the consequences.

Perversion. There are four natural groups into which the perversions, described for the first time in the clinical literature of the last ten years, naturally fall, namely fetichism, Sadism, Masochism, and inversion. These are, however, merely empirical divisions, and are by no means exclusive. Krafft-Ebing makes fetichism include cases when the sexual passion is focused upon some material object, some article of clothing, or some part of the body. The body itself, however, if the sexual passion be limited to that, may surely be as fetichistic as any part of it. From a psychological point of view, it is the narrowing of the means of representation and the exclusion of more adequate means of symbolism that makes the fetichist, who is thus, as Krafft-Ebing says, a monster by defect. The defect, however, is in the symbolism and not in the feeling which it awakens, for hyperæsthesia is almost a constant accompaniment of all such perversions. Fetichism is properly the failure of the intellectual or symbolical side, which is characteristic to a greater or less degree of all. The class to which the term fetichism is ordinarily limited is simply that in which this side is comparatively more prominent; Sadism, Masochism and inversion are also fetichistic.[1]

When the fetich is an object, it is most frequently some article of clothing or connected therewith, the naked body having sometimes an inhibitive effect. Binet[2] describes a case where the object of desire and the only stimulus to sexual excitement were the nails in the soles of a lady's shoes. Velvet and fur are frequently fetichistic, a fact which indicates the connection of sexual feeling with sensations of touch. Odors also have in some cases a very powerful sexual stimulus. The most frequent fetiches, however, are those which depend upon the sense of sight. Handkerchiefs and white underclothing are frequent fetiches of clothing. The parts of the body most commonly fetichistic are the eye, the hair, the hand and the foot. These are the parts that are most ordinarily exposed, and will therefore be most likely to stamp them-

[1] Cf. paragraph on symbolism and fetichism.

[2] *Revue Philosophique*, July to Dec., 1887, "Le Fetichisme dans l'Amour."

selves upon the phantasy under conditions of sexual emotion.

Mental characteristics may became fetichistic. J. J. Rousseau's case is a classic example.[1] Bodily defects even become attractive. Des Cartes' preference for squint-eyed women is an instance. Dr. Lydston of Chicago[2] gives a case of a man who, after a liaison with a woman with an amputated leg, was satisfied only with others having the same defect. The time of the day may become fetichistic. Garnier[3] gives a case where, on account of early associations, coition was impossible except in the morning. Even attraction for an individual may be fetichistic, and may be felt to be degrading, although too powerful to shake off. Daudet, in his novel "Sappho," makes a very suggestive study of this feature of illicit love.

Next to the general neurasthenic diathesis, which lies at the basis of all perversion, and the morbid working of the phantasy, perhaps the best marked characteristic of fetichism is the existence of a second life,[4] a segmented or divided self which may be colored by sexual love, but unable to come to fruition in the sexual act, or if so, with a diminished amount of pleasurable feeling. The reactions excluded or cut off from the stimulus of sexual gratification still keep up for a time an independent existence. Krafft-Ebing's Obs. 44, 45, 46, 47, 48, 49, 50, 53, 54, 60, 64, 76, 86, 108, 109, 110 and many others give evidence of this division. Obs. 44 gives a typical example of a pervert, in whom the reception of blows and wounds played a good part in his sexually-colored imagination, while he often had the most enthusiastic inclination for young girls of his acquaintance, but not connecting this in any way with his sensuous thoughts. In his dreams, also, these two circles of erotic presentations never mingled. Both spheres were for him a kind of *poésie*, but they remained two separate worlds.

The lack of coincidence of desire and pleasure has been frequently noted, and is an evidence of a form of segmentation. Dr. Mathews Duncan[5] describes this condition as very common with women. With fetichists, as with normal individuals, desire may be exhausted without pleasure, which is dependent, as most of these cases show, upon the suitable stimulus of the sensuous phantasy. Krafft-Ebing's Obs. 86[6] is illustrative. The alternation of waking and sleeping also

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[1] See his "Confessions," and Binet, *op. cit.*
[2] Lecture on Sex Perversions.
[3] "Anomalies Sexuelles."
[4] Cf. Pamphlet by Dr. Moritz Benedikt on "Second Life."
[5] "Sterility in Woman."
[6] *Op. cit.*

bears upon segmentation. The functions of the brain when dreaming, although connected with the waking life, have a considerable degree of independence. This is doubtless due to the fact that the higher centres are not in full control. There comes thus to be formed a sort of second self, a quasi-personality, to which the sex functions particularly become relegated. The normal form of this connection is indicated in emissions accompanied with dreams.

The presence of dreams is regarded generally by physicians as a sign of health. Dreamless emissions are on the road to become dangerous, leading to emissions without erections, and showing a weakening of the psycho-physical connections of the sexual apparatus. The subconscious region, which controls the dreams, comes into play in sexual congress and is normally led by the higher centres. If it is then properly fatigued, it is not aroused for some time in dreams. There are several cases that show that when these psychic centres are not so fatigued, emissions may occur very shortly after coition.

A collection of erotic dreams made by the present writer, from a number of normal individuals, indicates that dreams accompanying emissions are frequently Sadistic, Masochistic or inverted in character. Such dreams under unhealthy nutritive conditions might become the starting point of fetichisms of different kinds. They might more readily lend themselves to fetichisms where coitus is unnecessary, as in emissions the male organ is without the stimulus of contact. It would seem that this source might favor inversions particularly, since the imagination here still uses a whole person, although it fails to involve those higher ranges which are concerned with future generations and the destiny of mankind, and those deeper and more intensive hereditary æsthetic feelings which are associated with the presentation of the female sex. Wide somatic reverberations or complete erethism must be absent during sleep.[1]

The fact that hypnotism has been the most successful agent in the treatment of cases of perversion, shows the importance of the underlying or divided-off part of the personality, and the danger in not recognizing it, developing it, and bringing it into connection with the normal life.

Leaving the consideration of the more intellectual or formal side, let us turn to those perversions where the kind of feeling is the important feature, and where the fetichistic object or action may vary considerably with the same individual so long as it serves to focus the abnormal emotional condition.

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[1] Cf. Mercier in "Discussion on Imperative Ideas," *Brain*, 1895.

As we saw in studying the sexual habits of the lower animals, courting and combat are the constant preliminaries to sexual gratification. These shade into one another, courting tending to take the place of the more basal form of combat. The passions which thus come to be associated with love are those of fear and anger, both of which, by arousing the whole nature and stimulating the nutritive sources from which they flow, come to increase the force of the sexual passion to which they lead up and in which they culminate and are absorbed. Even here we saw traces, as with the woodgrouse's cruelty to his mate, of the morbid or excessive action of these underlying passions, evidences that they had not been completely overcome, that love had not been sufficient to cast out fear and anger. In the more emotional perversions of Sadism and Masochism, we find a relapse to these primitive passions. In Sadism[1] we find this special toning of the emotions to run in the direction of anger. The fetichists here are active and often violent. In Masochism[2] the opposite condition is found. Fear or related emotions, a sense of being mastered and a delight in it, are the general features. To these are to be added various forms which are related to one or the other of these salient classes.

As already indicated, the relapse to the underlying passions of fear and anger is accompanied with and sometimes caused by fixed ideas or fetichisms in the primary or secondary courting tendencies. Masochism in women is rare; even fewer cases are reported than of Sadism. This is in harmony with the normal Masochistic tendency of women. Masochism in men, on account, perhaps, of the greater difficulty in bringing it into contact with the actualities of life and the consequent imaginative concentration, offers very many cases. It is, moreover, from the representative side, connected with a fault in the secondary courting tendency which embraces more highly irradiated and therefore less firmly established reactions.

Masochism, as many of the cases show, occurs along with its apparent contrary, Sadism. It seems quite possible that an originally Masochistic feeling might pass into a certain degree of Sadism. Under the action of the secondary courting tendency, a man comes to speculate on and to dwell upon representations of the woman's sexual states. What he first observes would naturally be reactions of her secondary tendency, but his penetration might discover, or chance might place in his way the observation, that many women love to

[1] So called from the notorious Marquis de Sade.
[2] From Sacher Masoch, the author of "Venus in Furs."

be ruled and even humiliated, so that from a Masochistic motive he might become somewhat Sadistic at least.

Sadism in women ought to be connected with a more irradiated portion of the imagination than in men. In the preliminary anger scenes in the lower animals, the female is taken up mostly with observing and watching the cruel activities of the males. Known cases of female Sadism are few, but support this idea.

History presents some terrible examples of Sadistic passion. Nero, Tiberius, and the famous Marquis Gilles de Rays, who, during the space of eight years, tortured, violated, and killed, over 800 children, are classic examples. The latter monster declared that these acts gave him inexplicable happiness. He burnt the bodies and kept a few of the prettiest heads as tokens.

Sadistic fetichism in men offers the reverse of almost every kind of act to be observed in Masochism, although the proportion of symbolic acts seems less, and those involving the direct contact of the desired experience greater than in the former class, a fact in harmony with Sadism being a perversion of the primary courting law.

Inversion, or contrary sexual sensation, is a perversion which crosses all of the previous classes, but among the published cases at least, leans more to the passive or Masochistic form. This coincides with what is known of the peculiar societies of inverts. Coffee-clatches, where the members dress themselves with aprons, etc., and knit, gossip and crochet; balls, where men adopt the ladies' evening dress, are well known in Europe. "The Fairies" of New York are said to be a similar secret organization. The avocations which inverts follow are frequently feminine in their nature. They are fond of the actor's life, and particularly that of the comedian requiring the dressing in female attire, and the singing in imitation of a female voice, in which they often excel.

Raffalovich,[1] however, suggests that the cases that are described are morally the weakest, and correspond more closely to the female character. He thinks there is another more masculine although less known class, who prefer to inhibit their sexuality rather than gratify it in a way which, although natural to them, is at variance with the best instincts of humanity. "As men they love men, but they affirm that if they were women, they would love women." He thinks that here "we shall find ourselves in the presence of a new class adapted for celibacy, for study, for religion (since the realiza-

[1] "Uranism," *Journal of Comp. Neurology*, March, 1895.

tion of their desires is not of this world). Like the ideal physician of Plato, the best of them will be of sufficiently weak character to understand the sins of their fellows, and of sufficient strength of will to make themselves useful." Max Dessoir reports a case somewhat corresponding to this conception.[1]

Some of the cases that have been called inversions are evidently part of a profound degeneration of the whole constitution. The physical characteristics are sometimes so ambiguous that it is impossible to decide from the outer form or observation of the genitalia, whether the individual is male or female. Such cases, however, generally have their feelings in harmony with their real sex, and at other times relapse to a neutral and unsexed condition of feeling rather than to a state of inversion. The virago is generally of this character, the loss of femininity, growth of hair, etc., being more like the changes that follow the menopause.

In the most of the cases of known inversion, however, in which too the physical form is perfectly normal although the desires are generally female or passive, the imagination or sensuous phantasm seems to form the turning point of this part of their nature. As in normal life, especially with the young, after reading a novel the characters sometimes float before the mind as real persons, but at other times, by dint of a strong imagination, the reader picks up the very state of mind and character of the hero or heroine portrayed and acts it out in his own life, until he insensibly becomes the character represented as far as he is able to understand and imitate it. So, with an early awakening of the sexual passion, which comes in first in childhood through its most irradiated terms, it might be expected that a boy who either associates too much with girls, or who is excluded entirely from their society, might be led to make many representations to himself of their state of mind and feeling as well as the condition of their bodies while he is still too young to connect this with sexual realities, or, in some cases, to imagine them as physically different to himself. This would be a condition of hyperæsthesia of the secondary courting tendency, and might easily lead to a fetichism or fixed idea in this region. Such inversion would thus, as Ribot also claims of all real inversion, begin from above.

There are many cases which support this view, but Krafft-Ebing's Obs. 99[2] is an exceptionally interesting one, because it shows the development of a case of inversion from almost

[1] "Zur Psychologie der Vita Sexualis."
[2] *Op. cit.*

a normal condition to abhorrence of coition and even illusion of contrary sexual sensation. The case is autobiographical, and many of the feelings described are certainly not of the kind which would be likely to come to consciousness in a woman's mind, but which a man might very readily imagine a woman to have.

A case of inversion observed by the present writer at the Worcester Asylum for the Insane (under the direction of Pres. Hall, and by permission of Dr. Quinby, the superintendent), indicated the same anxiety to regard himself and to be regarded in a feminine attitude.

Ecstasy. The state of ecstasy as involving an emotional condition accompanying the operation of the phantasy is the connecting link between sex and art. Ecstasy is related, as Mantegazza points out,[1] on the one side to hypnotism, on the other to narcosis, although it is a condition more exalted than either. The morbid sex states, particularly, show their connection with hypnotism, and there is a similarity between the sex states generally and the class of phenomena Havelock Ellis[2] groups as hypnotic, including here somnambulism, hypnotism, ecstasy, trance, and catalepsy. These are all characterized, says he, by a decreased control of the higher nervous centres, and an increased activity of the lower. This may be admitted as true, relatively at least, of a certain stage, generally the climax of these states, but before this is reached the operation of the higher centres forms a necessary prelude. The fact that the hypnotic subject must be willing, with some very few exceptions, to receive treatment, the difficulty or impossibility of hypnotizing idiots, and the increasing possibility of hypnotic phenomena, as we ascend the animal series, show that in some way the higher centres are an important factor. This is particularly true of the more impressionable stages. Moll[3] says there is no suggestion without consciousness. Epilepsy, which is related to these states, begins, as the aura indicates, in the higher centres, advances, apparently, to a cramp among the motor cells of the cerebrum, and from there affects the whole motor system, which otherwise may not be diseased. Catalepsy, which presents an exaggeration of the muscular contractions common to all these states, has been explained as an exceedingly rapid series of innervating shocks from a lower centre, unable at the time to be checked by the inhibition of a higher one, in which case the process must go on until the lower centre is exhausted. Rieger[4] shows by tracings that those in a hypnotic state are

[1] "Die Ekstasen der Menschen." [3] "Hypnotism."
[2] "Man and Woman," p. 258. [4] "Der Hypnotismus," June, 1884.

more capable of continuing a contraction, keeping the arm extended, for example, at a certain point, but that the oscillations which indicate a loss of higher control or power of adjustment are greater than in normal subjects. Dr. G. Stanley Hall[1] shows that the reaction time in a hypnotic condition is more rapid than with normal subjects.

Generally speaking, it is thus a characteristic of these states that the associational processes are diminished in number and delicacy, but that those that do exist are more prominent and act more fatally than with normal people. The climax of these states is obsessional, but they involve a marginal associational activity of greater or less duration.

With repetition, as with fetichisms generally, a certain association becomes more firmly fixed, and the obsessional state more rapidly reached. Dr. Rieger found that a patient hypnotized by gazing at a pencil was afterwards more easily hypnotized by the use of a pencil than otherwise. With patients not well habituated, all distracting associations must be guarded against; the slightest noise, as the closing of a door, is sufficient to delay the desired effect. There seems to be a period when these stray stimuli have a much more than ordinary effect, as, indeed, with normal people on going to sleep.

Imperative ideas, or fragments of the phantasy, act in a similar manner.[2] The sex act in many animals may be compared with these states. Where the prodromal stage is extended, we have fascination similar to that of hypnotism; when cut short, as with the rabbit, it is most like an epileptic fit. The woodcock, described in the section on courting, after alighting, and before balzing begins, appears to be hyperæsthesic to all disturbing noises, but later on is not frightened even at the report of fire-arms. With the females in most cases the prodromal stage is more than ordinarily well marked. It is, as we have seen, the period of selection, in which the higher senses and the brain receive their highest stimulation. It is the symbol forming stage. Sensations of sight and hearing come to be symbolic or representative of those of touch and inner bodily feeling, and the higher, more complicated operations of the phantasy for all that exists below it.[3]

As the argument of these pages attempts to indicate, the somatic resonance of art is sex. The art psychosis is primarily an irradiation of sex, but when firmly established in the

[1] *Mind*, No. XXX.

[2] Cf. Hughlings, Jackson, Savage, *et. al.*, in "Discussion on Imperative Ideas" in *Brain*, 1895.

[3] Recent investigations on circulation in the brain connect higher arterial pressure with diminished capillary circulation. The small-

associational tracts to which it belongs, it may act more independently, and thus become an inhibitory agent, protecting and blocking the way between the external stimulus and the underlying hereditary reactions. This depends upon the extension of the associational stage, which must not be regarded as entirely impartial or indifferent, but as being extended by means of irradiation from the more frequently occurring events to those more rarely used.

There are two conditions which will permit the penetration of this region. Normally, when the associational tracts are completely occupied or surcharged by stimuli of various kinds, any additional stimulus will break through and lead to a discharge along the more deeply seated hereditary centres. Any exceptional erethism of the brain, as in reading or composing, where the associational tracts are mainly involved, puts the individual in a more susceptible condition. Involuntary emissions during sleep are frequently precipitated by such a previously erectile brain condition, even when the mental content has been entirely neutral from a sexual standpoint. The sentimental conditions generally (associational) are prodromal to sexual states. Grief, essentially an affection of the associational tracts, with a comparatively shallow, although persistent, somatic resonance, which, moreover, is generally connected with love, frequently favors sexual attachments. Other things being equal, the more intellectual an individual is, the more difficulty there will be in filling these associational tracts. His choice will be more discriminating and refined. As he becomes older, with the waning of the unused or less used somatic reactions and the increase of associational power, he will be still harder to please, or, in other words, the associational tracts will be harder to fill.

The second condition is where the associational tract is worn down by repetition or too early use, and the path is thus made easy for discharge to the lower centres. This we find with fetichists and with those given to sexual excesses generally. Here the rest of the associational tract remains unused. The fact that perversion usually begins in childhood is in harmony with this, and is evidently connected with the general law that the full complement of associational brain connections are not developed till late.

The associational tract may, of course, also be filled up from beneath, owing to the somatic stimulus of the sexual glands. This stimulus has come to be in man, as both perversions and

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est capillaries which subserve the finer reactions will of course suffer first. This is in harmony with our general view as to the course which the æsthetico-sexual erethism follows in a highly developed animal, and with the succession of the courting laws.

the history of normal cases show, a highly controllable factor.

Fear and anger as associated somatic reactions will increase the width of the bodily excitement, at first lowering, and, finally, if the proper stimulus occurs, raising the sexual potential much in the same way as in the strictly associational or intellectual regions.[1]

It is not to be understood that the art psychosis involves merely an intellectual surface. The associational region itself must have a certain depth. The art psychosis is essentially a state of ecstasy, with a tendency to produce a slight obsessional climax, as with sex itself and all of the hypnotic states, but it is an ecstasy in which the prodromal or associational stages are extended in proportion to the development of the art consciousness of the individual. If the art psychosis has not been developed, stimuli which ought to expend themselves in this region lead more directly to the distinctly sexual stage, as when the uneducated are confronted with the nude in art, or in the case of men who cannot look at a pretty woman without lusting after her in their hearts. The little ecstasy of art with its wide prodromal stage is, it seems, an equivalent of, and an inoculation against, the larger ecstasy of sex, a condition which normally obtains until the associational tracts are filled.

Putting this graphically, let us suppose that the oblong *a b c d*, Fig. 6, contains a certain associational tract radiating from 3, the discharge of which is accompanied by a feeling of ecstasy. This helps to fill up 2, and if the path is open to 2^1, to increase the radiation along a lower plane, an event which will give a wider somatic resonance to 3. If this path should be blocked or filled, and already on the point of discharge, the overflow will lead to *1*, which represents the central activities of sex.

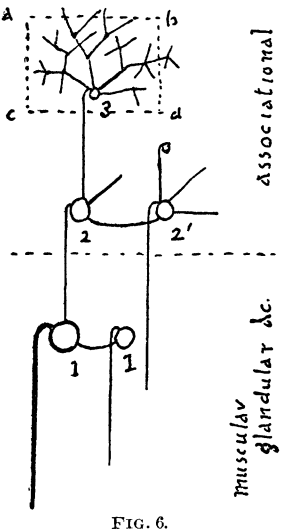

FIG. 6.

With the use of the indirect channel, the higher centres are in more frequent activity, and since pleasure, as we have seen in our study of perverts, is an outcome of these centres, the increase of the art psychosis is a gain in pleasure possibilities.[2]

[1] Cf. paragraph on fear and anger and Fig. 2.

[2] Cf. Marshall, "Pain, Pleasure and Æsthetics."

When the muscular and general glandular centres are thus called into action through the indirect channel, their activity will be of the nature of love, as the stimulus which incites them arises from a radiated portion of the sexual system. The painter's touch, the singer's note, the preacher's persuasive and passionate words, the succession of movements in a dance, the increasing intensity of drama and opera, follow the sexual curve, as does less definitely any muscular or vaso-motor activity capable of producing pleasure.

Besides the distinctly art psychosis, there are many other varieties of ecstasy that might be compared with it. Mantegazza has given a sort of natural history account of many of these. Certain forms of them, those of science, for example, seem to be a more direct irradiation of nutrition than is the art psychosis. But even these in their highest manifestations, when truth is sought for itself alone, do not differ essentially from the highest ecstasy of art.

Æsthetics. Turning briefly to the more differentiated phenomena of the art psychosis, we might notice imitation as a process which has from the time of Plato or earlier been associated with art.

The pleasure arising from putting one thing in terms of another, as we may put the world in terms of retinal color stimulation, as in painting, or in terms of natural objects, flowers, trees, etc., as in much myth and poetry, is at least part of a psychosis distinctly artistic. There is in this operation an element of the subjective or controllable, as Prof. Royce points out,[1] but underlying this there appears to be a deeper motive, or necessity of the individual constitution. Artistic imitation, if it is to have any meaning at all, belongs to a wider class, that of the formation of symbols, and is thus always more than a translation, however free. When a person imitates the movements of another for the purpose of mocking him, saying, "This is the way you do," there must be something more than the model and more than his imitative acts to account for the definite direction of his effort. This is certainly a subjective state, but it is largely uncontrollable. The observed act and the controllable deed are outward symbols of this inner and spontaneous feeling, and give what is called the meaning to both the terms compared.

The whole movement of metaphysical æsthetics has been, as Bosanquet very ably shows,[2] a progress from the dominance of the idea of imitation as an explanation of art to the recognition of characterization, meaning, or significance as of the

[1] *Psy. Rev.*, May, 1895.
[2] "History of Æsthetics," 1892.

first importance. From the metaphysical standpoint this emphasis of meaning culminates in the "idea" of Hegelism, "which is the unity of the world interpreted on the analogy of the intellect,"[1] and with certain modifications Schopenhaur's "idea" occupies a similar position. Supplementing this, and marking an advance towards psychology, Bosanquet himself offers the following conception:

> I suggest as an approximate psychological definition of æsthetic enjoyment — "Pleasure in the nature of a feeling or presentation, as distinct from pleasure in its momentary or expected stimulation of the organism." Such pleasure would always, it is my belief, be connected in fact with the *significance* of the content of feeling. . . . . If anything in the region of taste, smell, touch, heat, or cold has a value akin to that of beauty, it is not surely either the strongest or most delightful sensation, but rather the most suggestive sensation, or that which is most highly charged with associated ideas, so normal that we do not take them to be accidental. Not the scent of eau-de-cologne, but the smell of peat smoke, or of the sea; not the comfortable warmth of the house, but the freshness of the morning air, are sensations of a kind in which we may feel a certain disinterested delight not wholly dissimilar to æsthetic enjoyment. The merest germ of the sense of beauty seems to imply a distinctness between stimulus and significance.

It remains for psychology to identify this significance with, or at least to base it upon, hereditary affective reactions actually occurring within the organism, and which, as these pages attempt to indicate, are primarily irradiations from the region of sex.

Aristotle's theory of the drama as a representation or imitation affecting a katharsis of the passions of pity and fear, bases its operation psychologically on these deeper emotions which we have claimed as most closely connected with sex and art. From this point of view, there is much to be said in favor of regarding the drama as the typical fine art. It is, from the point of view of the material used, primarily an exploitation of movement, to which it adds all the higher sensuous and intellectual pleasures. The courting scenes of the lower animals are essentially dramatic. The early festivals and phallic ceremonies of lower races centre around dancing and the drama. Music and poetry plainly show their derivation from movement. Painting is no more passive than any of the other arts, but implies the movement of the eye for its appreciation as well as the sympathetic intuition of the muscular movements and subtle emotions (suppressed movements) of the original artist.

With undeveloped, badly developed, or decadent art, the symbolism, normally expressive of emotional depth, and correspondingly wide and fluent, becomes fetichistic and narrow.

[1] Bosanquet, *op. cit.*, p. 304.

In students' college papers and journals, Dr. Drew[1] recently examined 356 poems. Of these, 26 were indefinite, or referred to love but incidentally; 270 made mention of particular physical charms. The features most noted were: eyes, 91 times; hair, 51; face, 24. Among the poets who referred to the face, 13 were charmed by its brightness, 4 found it sweet, only 1 noted an intelligent face. The modern French decadents and symbolists show decidedly fetichistic signs, both in their neglect of the wider scientific, social, and philosophical experience of the nineteenth century and in their arbitrary choice of words.[2]

Conclusion. Art, like sex, is, however, in its best conditions essentially an overflow of health and strength, an outcome of the highest metabolism of the organism. Its dynamic power is thus the most intense, its influence on the individual profound and purifying. Can education and philosophy neglect such a power?

It is to the young adolescent that its importance is greatest. On the one side we have the great passion of sex, unknown, budding, creating modifications that have well been called regenerative, a passion so plastic, so loosely knit together that the slightest accident suffices to decentralize and change the whole current of its life; on the other, vague hopes and aspirations, transcendental longings, poetic yearnings, a craving for sympathy and recognition. Shall grammar and algebra, or even the whole curriculum of the ordinary college, suffice to assuage this instinct? The "breakings out," the orgies, the sexual immoralities of student life, though less common, perhaps, among students than with other unmarried adolescents, yet indicate an overflow, a waste of energy, that mere repression, mere loading, will never curb, but rather repel when it does not destroy.

Why can not this plastic passion that underlies these manifestations be turned into channels where it may naturally flow? Does not sex itself produce its own best organ of inhibition in the love of the beautiful and works of art? Why should the best youths of our land be excluded from such a culture at an age when it would serve to engage the enthusiasm of many who are left cold by the dryness of academic literature, science, and mathematics? The history of art, a knowledge of architecture, archæology, and formal drawing, however useful in its way, does not touch the heart of the problem. These are not a natural overflow of our modern thought and feeling. The real work of art, as Taine says,[3]

[1] *Pedagogical Seminary*, Vol. II.
[2] Cf. Lombroso, "L'Homme de Genie."
[3] "Phil. of Art," trans., p. 180.

"is determined by an aggregate which is the general state of the mind and the surrounding manners." "Fill your mind and heart," says Goethe, "with the ideas and sentiments of your age, and the work will follow." Art is one, and each of its branches is affected by each of the others, but there is yet a truth in Hegel's conception[1] of the movement of the centre of gravity of art among the different arts as time moves on. At the present, poetry, painting, and music have each blossomed out in distinctly modern forms. These represent the natural overflow of our age, and these most recent evolutions are the material to quicken and purify the life-blood of our youth.

It may be said that the student may find this inspiration in the professional schools of art. But these are technical schools, and should be designed to meet the needs of those who intend to make the profession of art their work of life. They stand in the same position to the college and the university as do the schools of engineering, the schools of divinity, pedagogy, law, and medicine. This does not meet the real needs of education, where culture should be followed for the sake of its ennobling and uplifting influence, for the awakening of ideal interests, for the purifying and perfecting of the highest individual capacity. The student may neither want to paint, nor play, nor write, nor may he wish to dissect formulæ, or study specimens of ancient art. What he desires is to come into real and intimate contact with the life that fills our modern art, to appreciate and enjoy, and to feel with his very heart the ecstasy of love that art forever offers at nature's shrine. It is time that the art education of this country was put upon a psychological basis, its powers and possibilities recognized and turned to service in the cause of education.

"Who does not in this period," says Krafft-Ebing, "grow enthusiastic for the sublime and beautiful, remains a Philistine for the rest of his life."[2]

To quote Guyau[3]: "Art aids in the full development of life and becomes a gymnastic of the nervous system, a gymnasium of the mind. If we do not exercise our complex organs, they will produce in us a sort of nervous plethora, followed by atrophy. Modern civilization, which multiplies capacities

[1] Cf. his "Æsthetic."

[2] A study of children's drawings by Earl Barnes of California shows where the interest of the pupils lies, and this is where education should be applied. The rude figures that children love to draw on their slate, often the *bête noir* of the unintelligent teacher, are really much more artistic than the cubes and squares and conventional designs which they are compelled to copy. They are, at least, expressive and sincere.

[3] "Problems d'esthétique contemperaine," p. 10.

of all sorts, and by a true antinomy carries the division of functions to an excess, needs to compensate for this inequality by the varied play of art. Art has, then, its rôle in human evolution, and its extinction, perhaps, would mark the end. Our organism, as it improves, will come to economize more of its force, like all our machines, and in this way will always have a quantity in reserve. It is art that ought to employ the surplus of force unused by the ordinary demands of life. Art will thus double and triple our existence. A life of imagination will be superposed to that of real existence, and it is this that will irradiate the overflow of our sentiments. Art will thus be the perpetual return of all our unemployed faculties. One can conceive that art, this luxury of the imagination, might finish by becoming a necessity for all, a sort of daily bread."

Art, standing as it does between religion and philosophy, is in one sense, or in one of its stages, a criticism of life, as Matthew Arnold says of poetry. This is the most external, prodromal, or associational phase. It is in its deeper moments rather the creation of life. It gives men thoughts and experiences, and it thereby forms the experiences they already have. The artists are the makers, and are continually preëmpting the regions that have been heretofore unconscious. Says Walt Whitman, they "are not the followers of beauty, but the august masters of beauty," the "answerers," as he calls them, speaking of poets, or the makers of ideals.[1] This is the only sense in which all the arts are poetic. Painting, for example, is not poetical in proportion as it treats some literary theme, but in the proportion in which it issues categories and gives humanity a new and, perhaps, a deeper way of seeing things. A painter lends his eyes out, as Browning says, and his heart and brain as well.

It is love in its best development in a continued married life that gives us the pulse of this movement. The early periods of courting are times of intense criticism. Association and comparison are the necessary accompaniments of selection. But with a happy marriage the mind no longer has a feeling of estrangement. The stilted, formal conversation, the fear of pauses, the morbid solicitation, the critical spirit which haunts us in ordinary social contact, even when intimate and free, leave us entirely in the presence of the woman whose heart we know, and whose body and soul we love. We then become truly original, truly ourselves; thoughts come, impulse is free, creation is achieved.

The ennobling ecstasies of poetry, music, painting, and the enthusiasms generally, are at the same time an outcome of, and a substitution for this happiness.

[1] Cf. Havelock Ellis, "The New Spirit."